

DEVELOP

Dynamic balance

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Service Manual Field

ineo⁺ 450

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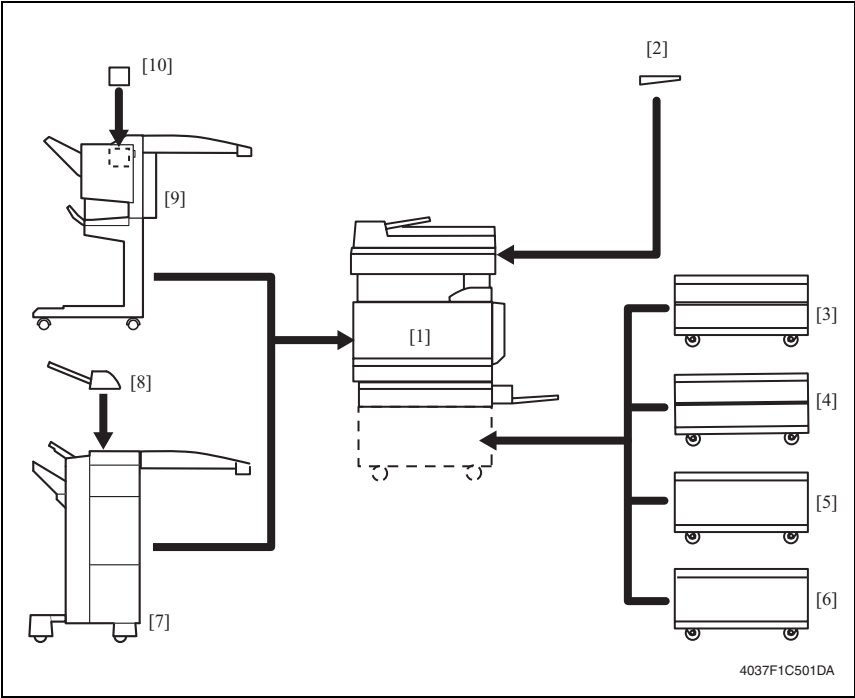
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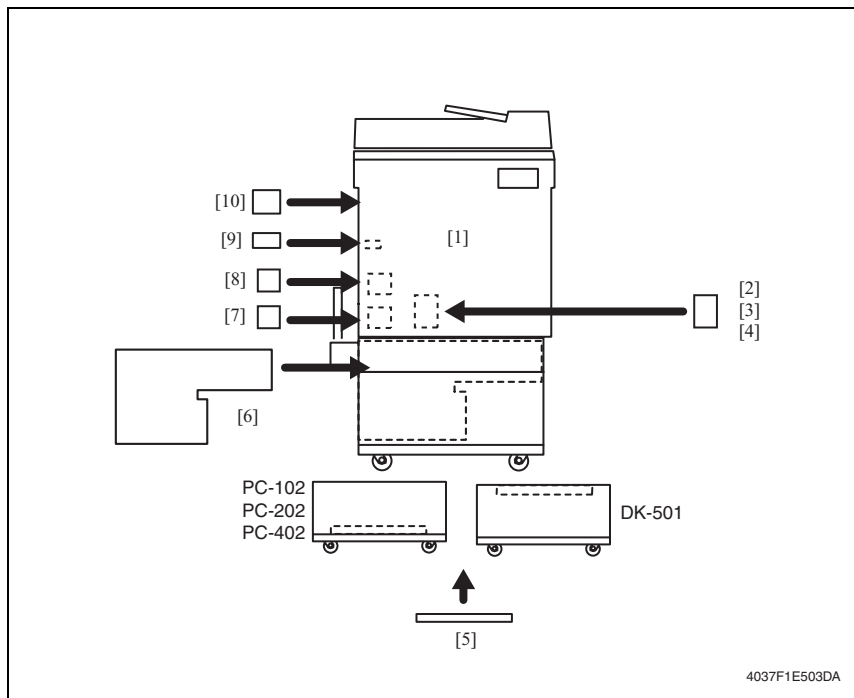
1. System configuration

1/2 System Front View



- | | |
|-------------------------------|-------------------------------|
| [1] Machine | [6] Paper Feed Cabinet PC-402 |
| [2] Working Table WT-501 | [7] Finisher FS-507 |
| [3] Paper Feed Cabinet PC-202 | [8] Job Separator JS-601 |
| [4] Paper Feed Cabinet PC-102 | [9] Finisher FS-603 |
| [5] Desk DK-501 | [10] Punch Kit PK-501 |

2/2 System Rear View



- | | |
|----------------------------|--------------------------------|
| [1] Machine | [6] Image Controller IC-402 |
| [2] Fax Kit FK-502 | [7] Video Interface Kit VI-502 |
| [3] Mount Kit MK-703 | [8] Local Interface Kit EK-702 |
| [4] Mount Kit MK-704 | [9] Mechanical Counter MC-501 |
| [5] Dehumidifier Heater 1C | [10] Key Counter Kit KIT-1 |

2. Product specifications

2.1 Type

Type	Desktop-type printer integrated with scanner
Copying System	Electrostatic dry-powdered image transfer to plain paper
Printing Process	Tandem-type indirect electrostatic recording system
PC Drum Type	OPC (organic photo conductor)
Scanning Density	Equivalent to 600 dpi
Exposure Lamp	White rare-gas fluorescent lamp 30 W
Print Density	Equivalent to 600 dpi in main scanning direction × 1800 dpi in sub scanning direction
Platen	Stationary (mirror scan)
Original Scanning	Scanning in main scanning direction with a CCD (one-shot reading system)
Registration	Rear left edge
Paper Feeding System (Standard)	Multiple Bypass: 150 sheets
Three-way system	Tray 1: 250 sheets Tray 2: 500 sheets
Exposure System	Four-LED exposure
Developing System	HMT developing system
Charging System	DC comb electrode Scorotron system with electrode cleaning function (manual)
Image Transfer System	Intermediate transfer belt system
Paper Separating System	Selecting either application of nonwoven fabric bias or resistor grounding + low-pressure paper separator claws
Fusing System	Belt fusing

2.2 Functions

Types of Original	Sheets, books, and three-dimensional objects	
Max. Original Size	A3 or 11 × 17	
Multiple Copies	1 to 999	
Warm-up Time	99 sec. or less (at ambient temperature of 23° C/73.4° F and rated source voltage)	
Image Loss	Leading edge: 4.2 mm (3/16 inch), Trailing edge: 3 mm (1/8 inch), Rear edge: 3 mm (1/8 inch), Front edge: 3 mm (1/8 inch)	
First Copy Time	(Tray 1, A4, full size)	
	Monochrome print	5.5 sec. or less
	Color print	8.5 sec. or less
Copying Speed for Multi-copy Cycle (A4, 8-1/2 × 11)	Monochrome print	1-sided: 45 copies/min.; 2-sided: 37 copies/min.
	Color print	1-sided: 35 copies/min.; 2-sided: 31 copies/min.
Fixed Zoom Ratios	Full size	×1.000
	Reduction	Metric Area: ×0.500, ×0.707, ×0.816, ×0.866 Inch Area: ×0.500, ×0.647, ×0.733, ×0.785
	Enlargement	Metric Area: ×1.154, ×1.224, ×1.414, ×2.000 Inch Area: ×1.214, ×1.294, ×1.545, ×2.000
Variable Zoom Ratios	×0.250 to ×4.000	in 0.001 increments

2.3 Types of Paper

Paper Source		Tray 1	Tray 2	Multiple Bypass
Copy paper type	Plain paper (60 to 90 g/m ² / 16 to 24 lb)	○	○	○
	Translucent paper	—	—	—
	OHP transparencies (crosswise feeding only)	○ (20 sheets or less)	—	○ (20 sheets or less)
	Thick paper 1 (91 to 150 g/m ² / 24-1/4 to 40 lb)		○ (150 sheets or less)	
	Thick paper 2 (151 to 209 g/m ² / 40-1/4 to 55-1/2 lb)			
	Thick paper 3 (210 to 256 g/m ² / 55-3/4 to 68 lb) *1			
	Postcards		—	
	Envelopes	○ (10 sheets or less)	—	○ (10 sheets or less)
Labels	○ (20 sheets or less)	—	○ (20 sheets or less)	
Copy paper dimensions	Max. (width × length)	311.1 × 457.2 mm 12-1/4 × 18 inches	297 × 432 mm 11 × 17 inches	311.1 × 457.2 mm 12-1/4 × 18 inches
	Min. (width × length)	90 × 139.7 mm 3-1/2 × 5-1/2 inches	140 × 182 mm 5-1/2 × 8-1/2 inches	90 × 139.7 mm 3-1/2 × 5-1/2 inches

*1: Image is not guaranteed when thick paper 3 is used.

Optional Paper Feed Cabinet : Only the plain paper and thick paper 1 to 3 weighing 60 to 90 g/m² (16 to 24 lb) is reliably fed.

Automatic Duplex Unit : Only the plain paper and thick paper 1 to 3 weighing 64 to 90 g/m² (17 to 24 lb) is reliably fed.

2.4 Maintenance

Machine Durability	1,000,000 prints or 5 years, whichever is earlier
--------------------	---

2.5 Machine Specifications

Power Requirements	Voltage:	AC 110 V, 120 V, 127 V, 220-240 V
	Frequency:	50/60 Hz ± 3.0 Hz
Max Power Consumption	Less than 1500 W (120 V, 12 A / 220 - 240 V, 8 A)	
Dimensions	706 (W) × 765 (D) × 908 (H) mm 27-3/4 (W) × 30 (D) × 35-3/4 (H) inches	
Space Requirements	1014 (W) × 765 (D) mm *2 40 (W) × 30 (D) inches *2	
Mass	Approx. 125 kg / 275-1/2 lb (without IU)	

*2: The indicated spaced requirements represent the space required to fully extend the bypass tray.

2.6 Operating Environment

Temperature	10 to 30 °C / 50 to 86° F (with a fluctuation of 10° C / 18° F or less per hour)
Humidity	15 to 85 % (with a fluctuation of 20 %/h)

2.7 Built-in Controllers

Type	Built-in type controller	
CPU	PPC750 FX 600 MHz	
Printer Driver	PCL5e/c Emulation PCL6 (XL 2.1) Emulation PostScript 3 Emulation (3011)	
Scan Driver	TWAIN driver	
OS Compatibility	Server	Windows NT 4.0, 2000, or Server 2003
	Client	Windows 98 Second Edition, Windows Me, Windows 2000, Windows XP, or Windows NT 4.0 (SP6a) MacOS 9.2 or later or MacOS X 10.2 or 10.3
Interface	Standard: Ethernet (10Base-T or 100Base-TX) Optional: USB 1.1, USB 2.0, or IEEE 1284	

NOTE

- These specifications are subject to change without notice.

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3. Periodical check

3.1 Service schedule

Guarantee period (5-year or 1,000,000 prints)

	Percycle × print number	× 10,000-print																		Number of times
		6	12	15	18	20	24	30	36	40	42	45	48	54	60	66	72	75	78	
Main body	Upon each call (60,000)	●	●		●		●	●	●		●		●	●	●	●	●		●	16
	150,000			●				●			●			●			●		●	6
	200,000				●				●					●				●		4
	300,000							●						●					●	3
PC-102 PC-202 PC-402	300,000							●						●					●	3
FS-507 FS-603	300,000							●						●					●	3

3.2 Maintenance items

3.2.1 Parts to be replaced by users (CRU)

No.	Class	Parts to be replaced	Cycle	Clean	Replace	Descriptions
1	Processing sections	Imaging Unit C/M/Y	50 K		●	
2		Imaging Unit K	100 K		●	*1
3		Dust filter	100 K		●	*1
4		Comb electrode	When TC is replaced	●		
5		Toner cartridge: TC (TC Y/TC M/TC C)	11.5 K		●	
6		Toner cartridge: TC (TC K)	11.5 K		●	*2
7		Deodorant filter	11.5 K		●	*2
8	Image Trans- fer section	Waste Toner Box	30 K		●	
9	LPH section	LPH Assy	When IU is replaced	●		

*1: The Imaging Unit K and Dust filter are the Kit parts.

*2: The TC K and Deodorant filter are the Kit parts.

3.2.2 Maintenance call (per 60,000-print)

No.	Class	Parts to be replaced	Number of personnel	Check	Clean	Replace	Lubrication	Descriptions
1	Overall	Paper take-up and image conditions		●				
2		Appearance		●	●			
3	Transport section	Registration Roller			●			
4		Paper Dust Remover			●			
5		Transport Roller			●			
6		2nd Image Transfer Entrance Upper Guide			●			
7	Image Transfer section	Around waste toner port			●			
8	LPH section	LPH Assy			●			
9	ADF section	Pick-up Roller			●			
10		Paper Take-up Roller			●			
11		Separation Roller			●			
12		Transport Belt, Roller and Roll			●			
13	Duplex section	DUP Roller			●			

3.2.3 Periodical parts replacement 1 (per 150,000-print)

No.	Class	Parts to be replaced	Number of personnel	Check	Clean	Replace	Lubrication	Descriptions
1	Overall	Paper take-up and image conditions		●				
2		Appearance		●	●			
3	Transport section	Paper Dust Remover	1			●		
4		2nd Image Transfer Roller Unit	1			●		
5	Processing section	Ozone Filter	1			●		

3.2.4 Periodical parts replacement 2 (per 200,000-print)

No.	Class	Parts to be replaced	Number of personnel	Check	Clean	Replace	Lubrication	Descriptions
1	Overall	Paper take-up and image conditions		●				
2		Appearance		●	●			
3	Tray 1	Paper Take-up Roller	1			●		
4	Bypass	Separation Roller	1			●		
5	ADF section	Pick-up Roller	2			●		
6		Paper Take-up Roller	1			●		
7		Separation Roller				●		

3.2.5 Periodical parts replacement 3 (per 300,000-print)


















No.	Class	Parts to be replaced	Number of personnel	Check	Clean	Replace	Lubrication	Descriptions
1	Overall	Paper take-up and image conditions		●				
2		Appearance		●	●			
3	Tray 2	Pick-up Roller	1			●		
4		Paper Take-up Roller	1			●		
5		Separation Roller Assy	1			●		
6	Image Transfer section	Image Transfer Belt Unit	1			●		
7	Fusing section	Fusing Unit	1			●		
8	PC-102	Pick-up Roller	1			●		Replace those three parts at the same time.
9	PC-202	Paper Take-up Roller	1			●		
10	PC-402	Separation Roller Assy	1			●		
11	FS-507	Paper Feed Roller, Roll			●			
12	FS-603	Transport route, Guide			●			
13		Sensor			●			

3.3 Maintenance parts

- To ensure that the machine produces good copies and to extend its service life, it is recommended that the maintenance jobs described in this schedule be carried out as instructed.
- Replace with reference to the numeric values displayed on the Life counter.
- Maintenance conditions are based on the case of A4 or 8.5 × 11, Standard mode and Low Power Mode OFF.

3.3.1 Replacement parts

A. Main unit

No.	Classification	Parts name	Quantity	Actual durable cycle *1	Parts No.	Descriptions	Ref. Page in this manual
1	Tray 1	Paper Take-up Roller	1	200 K	4021-3012-XX		 15
2		Separation Roller Assy	1	200 K	4034-0151-XX		 15
3	Bypass	Paper Take-up Roller	1	200 K	4131-3001-XX		 16
4		Separation Roller Assy	1	200 K	4034-0151-XX		 18
5	Tray 2	Pick-up Roller	1	300 K	4030-3005-XX		 22
6		Paper Take-up Roller	1	300 K	4030-3005-XX		 20
7		Separation Roller Assy	1	300 K	4030-0151-XX		 18
8	Transport section	Paper Dust Remover	1	150 K	1483-0762-XX		 24
9		2nd Image Transfer Roller Unit	1	150 K	4049-411		 28
10	Fusing section	Fusing Unit	1	300 K	4049-522 *4 4049-523 *5 4049-524 *6		 35
11	Processing section	Imaging Unit C/M/Y	1	50 K	—		 37
12		Imaging Unit K	1	100 K	—	Dust filter *2	 37
13		Ozone Filter	1	150 K	1483-0757-XX		 26
14		Toner Cartridge (YMCK)	1	11.5 K	—	Deodorant filter *3	 37
15	Image transfer section	Image Transfer Belt Unit	1	300 K	4049-212		 29
16		Waste Toner Box	1	30 K	4049-111		 25
17	ADF section	Pick-up Roller	2	200 K	4582-3022-XX	Replace those three parts at the same time.	 ADF
18		Paper Take-up Roller	1	200 K	4582-3014-XX		
19		Separation Roller	1	200 K	4582-3047-XX		

*1: Actual durable cycle is the Life counter value.

*2: Also replace the Dust filter packed in the black imaging unit at the same time when 100 K is reached.

*3: Also replace the Deodorant filter packed in the black toner cartridge at the same time when 11.5 K is reached.

*4: 220-240 V areas only.

*5: 120 V/127 V areas only.

*6: 110 V areas only.








B. Option

No.	Classification	Parts name	Quantity	Actual durable cycle *1	Parts No.	Descriptions	Ref. Page in this manual
1	PC-102	Pick-up Roller	1	300 K	4030-3005-XX	Replace those three parts at the same time.	*2
2	PC-202	Paper Take-up Roller	1	300 K	4030-3005-XX		
3	PC-402	Separation Roller Assy	1	300 K	4030-0151-XX		

*1: Actual durable cycle is the Life counter value.

*2: See each Option Service Manual.

3.3.2 Cleaning parts

No.	Classification	Parts name	Actual cleaning cycle *1	Descriptions	Ref. Page in this manual
1	Transport section	Registration Roller	Upon each call (60 K)		 23
2		Paper Dust Remover	Upon each call (60 K)		 24
3		Transport Roller	Upon each call (60 K)		 24
4		2nd Image Transfer Entrance Upper Guide	Upon each call (60 K)		 25
5	Processing section	Comb Electrode	When TC is replaced (11.5 K)		 27
6	Image transfer section	Area around the Waste Toner Collecting Port	Upon each call		 26
7	LPH section	LPH Assy	Upon each call or When IU is replaced		 27
8	Duplex section	Paper Feed Roller	Upon each call (60 K)		*2

*1: Actual cleaning cycle is the Life counter value.

*2: See Automatic Duplex Unit Service manual.

3.4 Concept of parts life

	Description	Life value (Specification value)	Max. number of printed pages
Waste Toner Bottle	A waste toner full condition is detected when about 8,000 printed pages have been produced after a waste toner near full condition has been detected.	—	30,000 *
Fusing unit	The number of copies made is counted. (The counter counts up 2 for paper whose sub scan direction exceeds 216 mm.) When printing prohibited is encountered, the machine prohibits the initiation of any new print cycle.	300,000	402,000 *
Paper Dust Remover	The number of copies made is counted. (The counter counts up 2 for paper whose sub scan direction exceeds 216 mm.)	150,000	152,000
Ozone Filter	The number of copies made is counted. (The counter counts up 2 for paper whose sub scan direction exceeds 216 mm.)	150,000	152,000
2nd Transfer Roller Unit	The number of copies made is counted. (The counter counts up 2 for paper whose sub scan direction exceeds 216 mm.)	150,000	152,000
Transfer Belt Unit	The number of copies made is counted. (The counter counts up 2 for paper whose sub scan direction exceeds 216 mm.) The number of copies made is compared with the value of the number of hours through which the belt has turned translated to a corresponding value of the number of copies made and the value, whichever reaches the life specifications value, is detected. When printing prohibited is encountered, the machine prohibits the initiation of any new print cycle.	300,000	402,000 *
Imaging Unit C/M/Y	The number of hours through which the PC Drum has turned is compared with the number of hours through which the Developing Roller has turned translated to a corresponding value of the number of hours through which the PC Drum has turned and the value, whichever reaches the life specifications value, is detected.	2,928 min.	3,045 min. *
Imaging Unit K		4,137 min	4,220 min. *

*: The initiation of any new print cycle is inhibited when the maximum number of printed pages is reached.

A. Conditions for Life Specifications Values

- The life specification values represent the number of copies made or figures equivalent to it when given conditions (see the Table given below) are met. They can be more or less depending on the machine operating conditions of each individual user.

Item	Description
Job Type	Monochrome: Making 5 copies per job Color: Making 4 copies per job
Paper Size	A4
Color Ratio	Black to Color = 5:1
CV/M	Black: 12,000 / Color: 2,400
Original Density	B/W = 5 % for each color, 6 % for Monochrome
No. of Operating Days per Month	20 days (Main Power Switch turned ON and OFF 20 times per month)

B. Control causing inhibited printing for one part when an inhibited-printing event occurs in another part

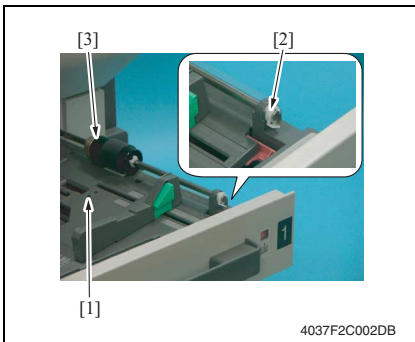
Purpose	In order to reduce the maintenance call times: when printing prohibiting is reached for any of the following parts, make printing prohibited also for other parts whose life value is reached, and replace those parts at the same time.
Target parts	Fusing unit, Image Transfer Belt Unit, Imaging Unit /C, Imaging Unit /M, Imaging Unit /Y, Imaging Unit /K

3.5 Maintenance procedure (Periodical check parts)

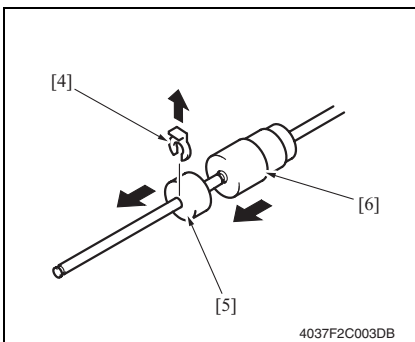
NOTE

- The alcohol described in the cleaning procedure of Maintenance represents the isopropyl alcohol.

3.5.1 Replacing the Tray 1 Paper Take-up Roller



1. Slide out the Tray 1.
2. Lock the Paper Lifting Plate [1] into position.
3. Snap off the C-clip [2] from the Tray 1 Paper Take-Up Roller Assy [3].
4. Remove the shaft for the Tray 1 Paper Take-up Roller Assy [3] from the front Bushing.

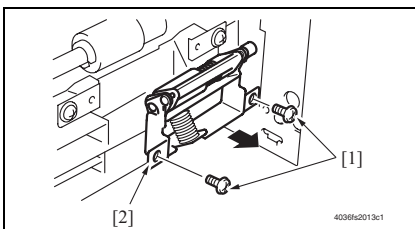


5. Snap off the C-clip [4], one collar [5] and remove the Tray 1 Paper Take-Up Roller [6].
6. To reinstall, reverse the order of removal.
7. Select "Service Mode" → "Counter" → "Life" and clear the count of "1st."

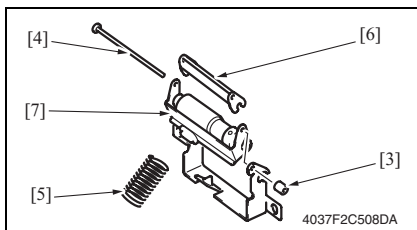
NOTE

- Replace the Tray 1 Paper Take-up Roller and Tray 1 Separation Roller at the same time.

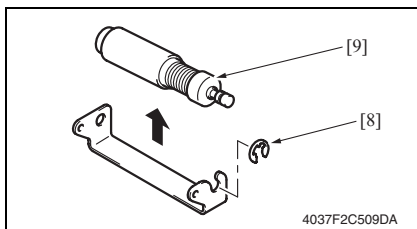
3.5.2 Replacing the Tray 1 Separation Roller Assy



1. Slide out the Tray 1.
2. Remove two screws [1] and the Tray 1 Separation Roller mounting bracket Assy [2].



3. Take off the rubber stopper [3], shaft [4], spring [5], and guide plate [6] to remove the Paper Separation Roller fixing bracket Assy [7].

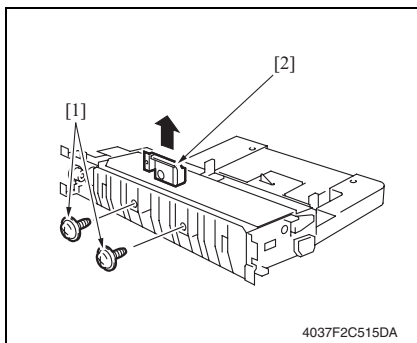


4. Snap off the E-ring [8] and the Tray 1 Paper Separation Roller Assy [9].
5. To reinstall, reverse the order of removal.
6. Select "Service Mode" → "Counter" → "Life" and clear the count of "1 st."

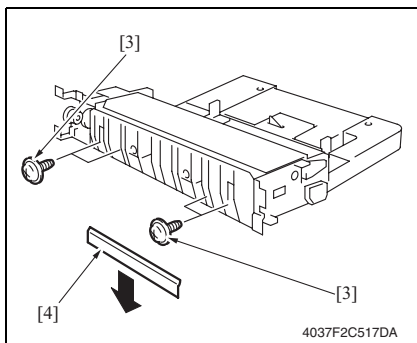
NOTE

- Replace the Tray 1 Paper Take-up Roller and Tray 1 Separation Roller at the same time.

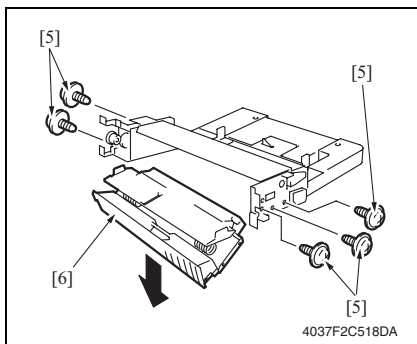
3.5.3 Replacing the Bypass Tray Paper Take-up Roller



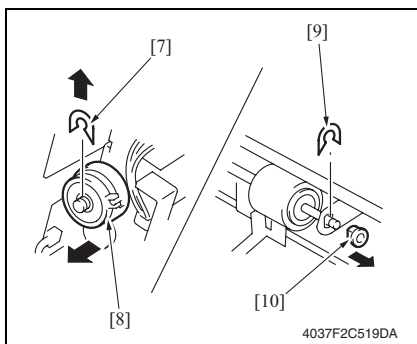
1. Remove the Multi Bypass Unit.
2. Remove two screws [1], and remove Bypass Paper Separation roller fixing bracket Assy [2].



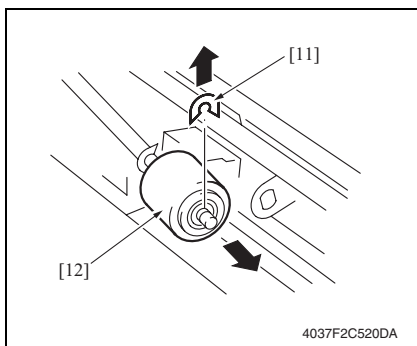
3. Remove four screws [3], and remove the Frame [4].



4. Remove five screws [5], and remove the Frame [6] under the Bypass Unit.



5. Snap off the C-clip [7], and remove the Bypass Paper Feed Clutch [8].
6. Snap off the C-clip [9] for the Paper Take-up roller, and remove the shaft [10].

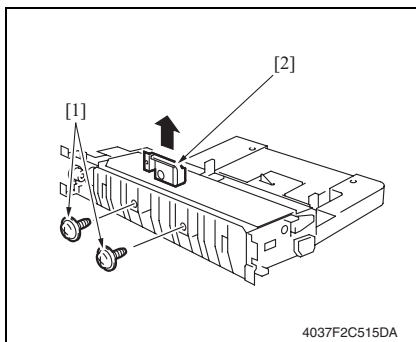


7. Snap off the C-clip [11], and remove the Bypass Paper Take-up Roller [12].
8. To reinstall, reverse the order of removal.
9. Select "Service Mode" → "Counter" → "Life" and clear the count of "Manual Tray."

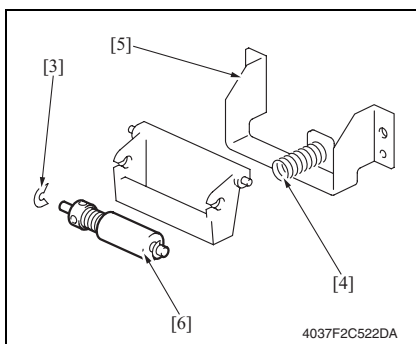
NOTE

- Replace the Bypass Paper Take-up Roller and the Bypass Separation Roller Assy at the same time.

3.5.4 Replacing the Bypass Tray Separation Roller Assy



1. Remove the Multi Bypass Unit.
77
2. Remove two screws [1], and remove Bypass Paper Separation Roller fixing bracket Assy [2].

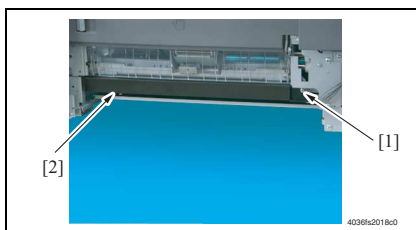


3. Snap off the C-clip [3], and remove the spring [4] and the guide plate [5]. Remove the Bypass Paper Separation Roller Assy [6].
4. To reinstall, reverse the order of removal.
5. Select "Service Mode" → "Counter" → "Life" and clear the count of "Manual Tray."

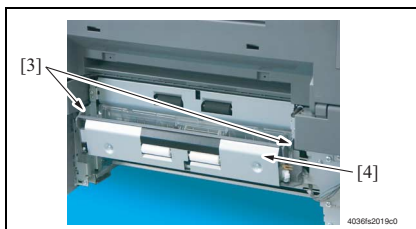
NOTE

- Replace the Bypass Paper Take-up Roller and the Bypass Separation Roller Assy at the same time.

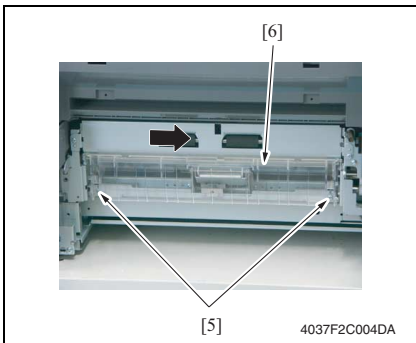
3.5.5 Replacing the Tray 2 Separation Roller



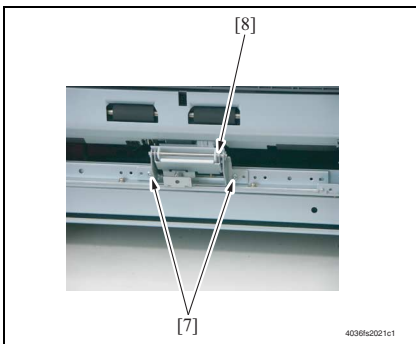
1. Slide out the Tray 2.
2. Remove the Multi Bypass unit.
3. Remove the Screw [1], and the Reinforcement plate [2].



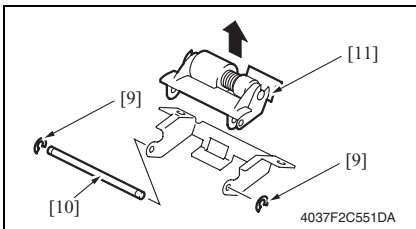
4. Open the Vertical transport door.
5. Remove two Claws [3] and the Vertical transport door [4].



6. Remove two Screws [5], and remove the Jam processing cover [6].



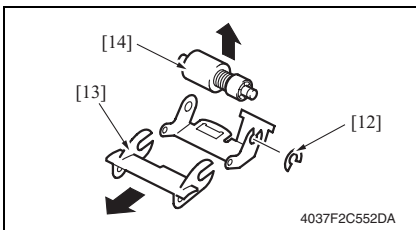
7. Remove two Screws [7] and the Tray 2 Separation Roller installation plate Assy [8].



8. Remove two C-rings [9] and the Shaft [10], and remove the Separation Roller fixing plate Assy [11].

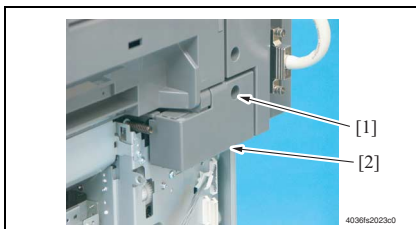
NOTE


- Use care not to miss the Spring.

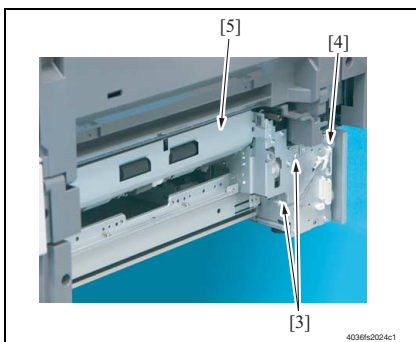


9. Remove the C-ring [12] and Guide [13], and remove the Tray 2 Separation Roller Assy [14].

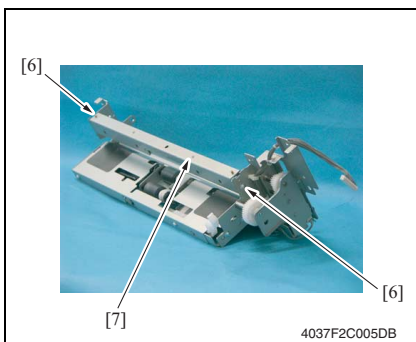
3.5.6 Replacing the Tray 2 Paper Take-up Roller



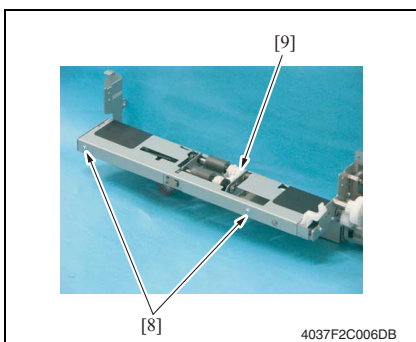
1. Remove the Tray 2 Separation Roller installation plate Assy.
 See the procedures 1 to 7 in page 18 "Tray 2 Separation Roller."
2. Remove the Screw [1] and Wiring cover [2].



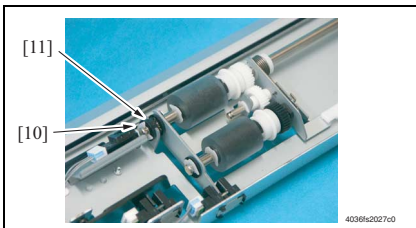
3. Remove two Screws [3] and Connector [4], and remove the Tray 2 Paper Take-up Roller Assy [5].



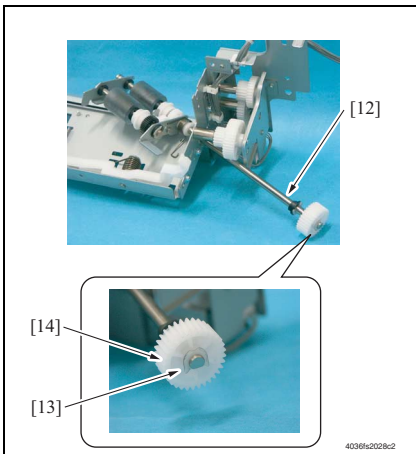
4. Remove two Screws [6] and the Installation plate [7] of the Tray 2 Separation Roller installation plate Assy.



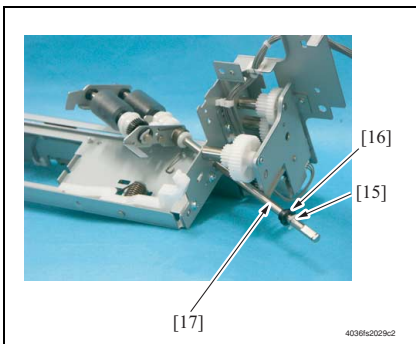
5. Remove two Screws [8] and Tray 2 Paper Take-up Roller cover [9].



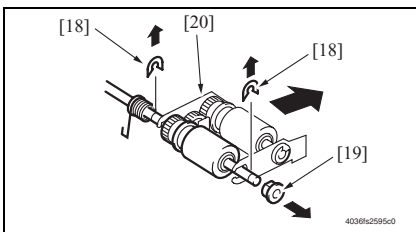
6. Remove the C-ring [10] and Bushing [11].



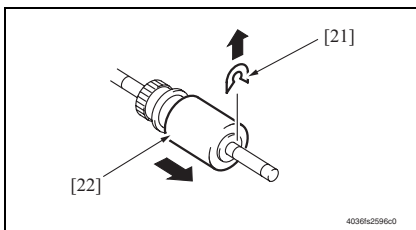
7. Remove the C-ring [13] and Gear [14] while sliding out the Shaft Assy [12] in the direction indicated in left figure.



8. Remove the C-ring [15] and Bushing [16], and remove the Shaft Assy [17].

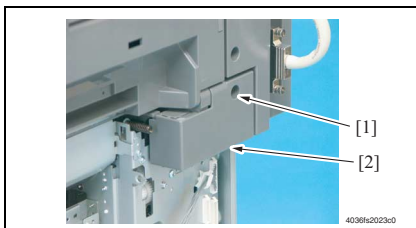



9. Remove two E-rings [18] and Bushing [19], and remove the Tray 2 Pick-up Roller fixing plate Assy [20].

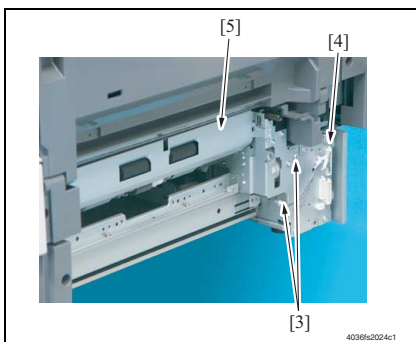


10. Remove the C-ring [21] and Tray 2 Paper Take-up Roller [22].
11. Select "Service Mode" → "Counter" → "Life" and clear the count of "2nd."

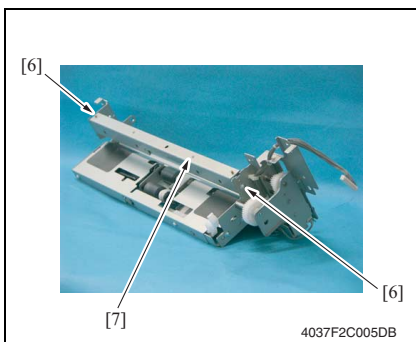
3.5.7 Replacing the Tray 2 Pick-up Roller



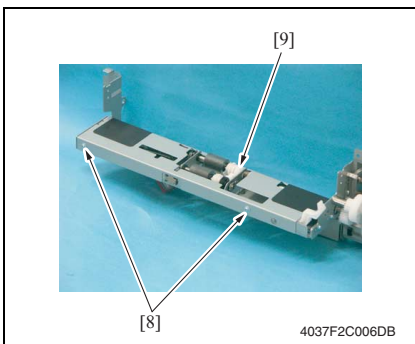
1. Remove the Tray 2 Separation Roller installation plate Assy.
 See the procedures 1 to 7 in page 18 "Tray 2 Separation Roller."
2. Remove the Screw [1] and Wiring cover [2].



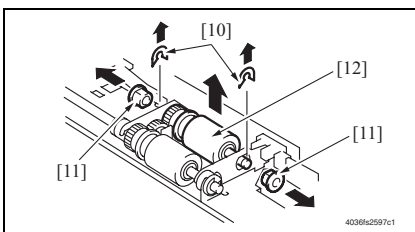
3. Remove two Screws [3] and Connector [4], and remove the Tray 2 Paper Take-up Roller Assy [5].



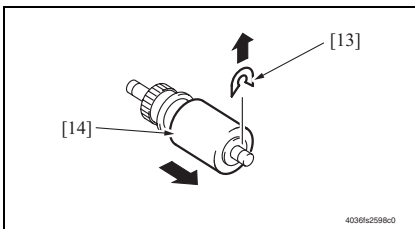
4. Remove two Screws [6], and remove the Tray 2 Separation Roller installation plate Assy [7] together with Frame.



5. Remove two Screws [8] and Tray 2 Paper Take-up Roller cover [9].

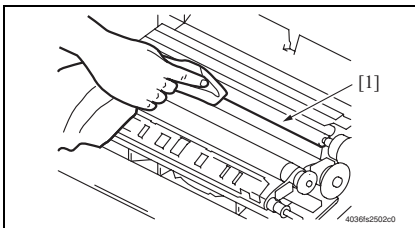



6. Remove two C-rings [10] and two Bushings [11], and remove the Tray 2 Pick-up Roller Assy [12].



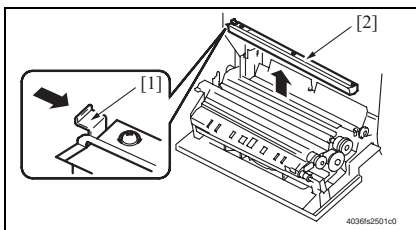
7. Snap off the C-ring [13], and remove the Tray 2 Pick-up Roller [14].

3.5.8 Cleaning of Registration Roller



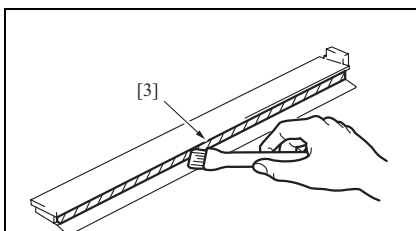
1. Open the Right Door.
2. Remove the Paper Dust Remover.
 See page 24 for Replacing the Paper Dust Remover.
3. Using a soft cloth dampened with alcohol, wipe the Registration Rollers [1] clean of dirt.

3.5.9 Paper Dust Remover

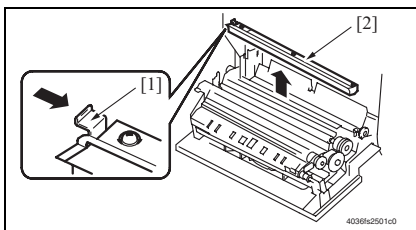


A. Cleaning Procedure

1. Open the Right Door.
2. Pushing the hook [1] with a blue label inward, remove the Paper Dust Remover [2].



3. Using a brush, whisk dust off the Paper Dust Remover [3].

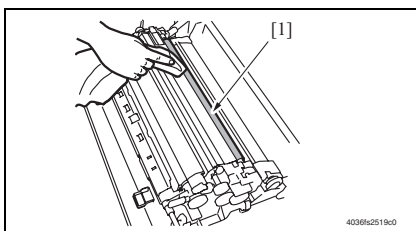


B. Replacing Procedure

1. Open the Right Door.
2. Pushing the hook [1] with a blue label inward, remove the Paper Dust Remover [2].
3. Remove the Ozone Filter.
4. Select "Service Mode" → "Counter" → "Life" and clear the count of "Paper Dust Remover/Ozone Filter."

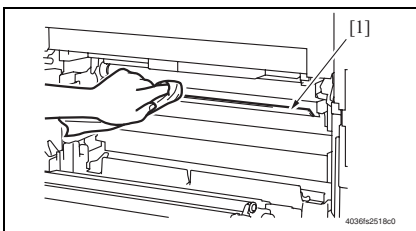
 26

3.5.10 Cleaning of Transport Roller



1. Open the Right Door.
2. Using a soft cloth dampened with alcohol, wipe the Transport Roller [1] clean of dirt.

3.5.11 Cleaning of 2nd Image Transfer Entrance Upper Guide



1. Open the Right Door.
2. Open the Left Door.
3. Remove the Waste Toner Box.
4. Remove two screws and slide the Transfer Belt Unit out halfway.
5. Wipe the 2nd Image Transfer Entrance Upper Guide [1] clean of dirt using a soft cloth.

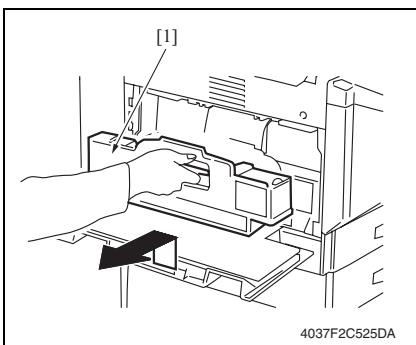
NOTE

- When cleaning, use care not to be hurt by the leading edge of the guide that is sharp.

3.5.12 Replacing the Waste Toner Box

NOTE

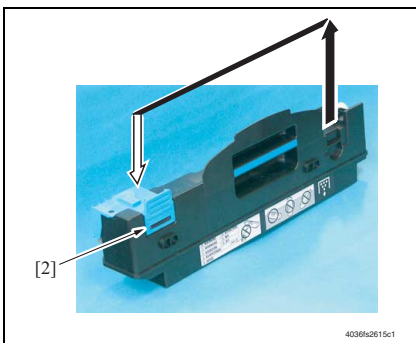
- If a Finishing Option is installed, remove it from the Main Unit before trying to replace the Waste Toner Bottle.
- When removing the Finishing Option, support the Horizontal Transport Unit with your hand to prevent it from dropping.



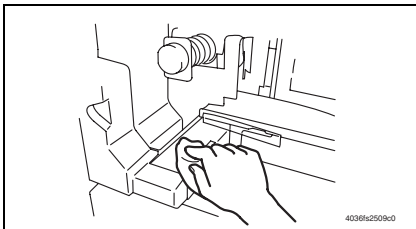
1. Turn OFF the main power switch.
2. Open the Left Door.
3. Grasp the handle, and remove the waste toner box [1].

NOTE

- Raise the waste toner box gently before removing it.
- If scattered toner has accumulated in the vicinity of the toner collecting port, do not tilt the waste toner bottle when removing it.
- Do not leave the waste toner bottle in a tilted condition after removing it.

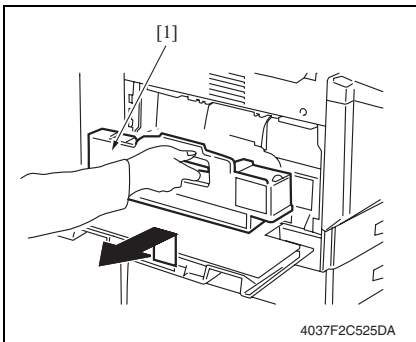


4. Remove the Cover [2] of Waste Toner Box, and set it on the Collecting port.

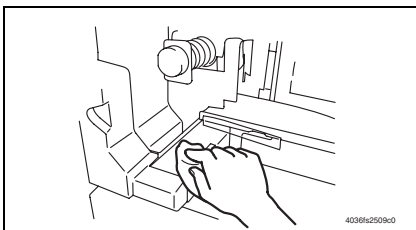


5. Clean the surface around the waste toner collecting port.
6. Remove the waste toner box from its box, and remove the packing material.
7. Grasp the handle, and set the waste toner box in place.
8. Close the Left Door.

3.5.13 Cleaning of the Area around the Waste Toner Collecting Port

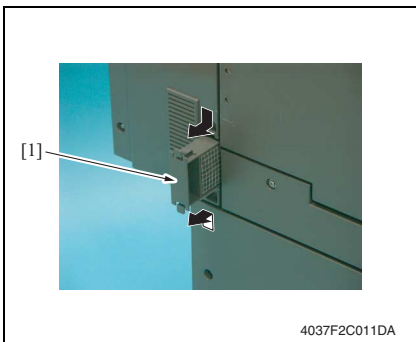


1. Open the Rear Left Cover.
2. Remove the Waste Toner Box [1].



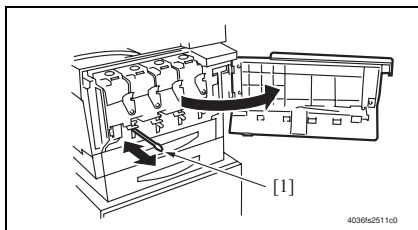
3. Wipe the areas around the Waste Toner Collecting Port clean of spilled toner and dirt using a soft cloth dampened with water or alcohol.

3.5.14 Replacing Ozone Filter



1. Holding onto the hook, remove the Ozone Filter [1].
2. Remove the Paper Dust Remover.
3. Select "Service Mode" → "Counter" → "Life" and clear the count of "Paper Dust Remover/Ozone Filter."

3.5.15 Cleaning of the Comb Electrode



1. Open the Front Door.
2. Clean the Comb Electrode by moving the Comb Electrode Cleaning Lever [1] In and Out several times.

NOTE

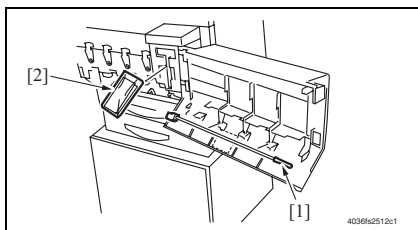
- Move the Comb Electrode Cleaning Lever slowly forward and backward until it stops.

3.5.16 Cleaning LPH Assy

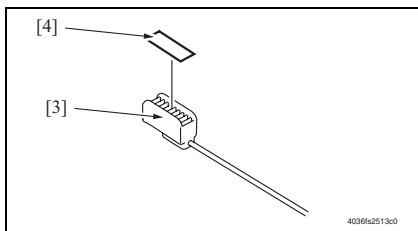
NOTE

- After the Imaging Unit has been removed from the main unit, be sure to place it in the plastic bag (black) or wrap it in a light shielding cloth, and store it in a dark place.

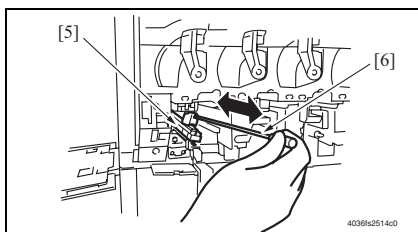
Do not leave the Imaging Unit exposed to light for a extended period of time, as it may become damaged.



1. Open the Front Door.
2. Slide out the IU (C/M/Y/K).
3. Remove the LED Cleaning Jig [1] and LED Cleaning Jig Pad [2].



4. Affix a LED Cleaning Jig Pad [4] to the LED Cleaning Jig [3].

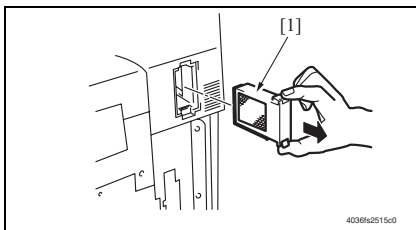


5. Clean the LED [5] of the LPH Assy by moving the LED Cleaning Jig [6] three reciprocating motions.

NOTE

- Use only the specified jig (LED Cleaning Jig) for cleaning.

3.5.17 Replacement of the Deodorant Filter

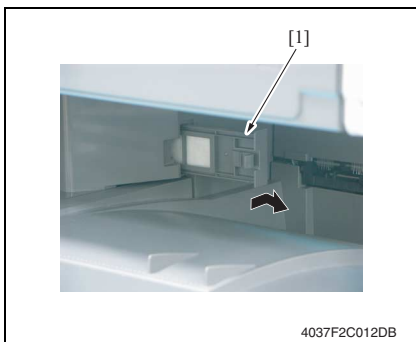


1. Holding onto the hook, take out the Deodorant Filter [1].

NOTE

- The Deodorant Filter is supplied with the toner cartridge (black). Replace it when replacing the toner cartridge (black).

3.5.18 Replacement of the Dust Filter



1. Grasping the hook, remove the Dust Filter [1].

NOTE

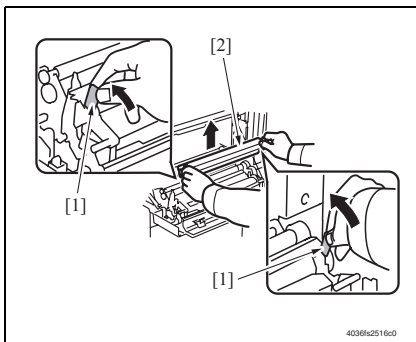
- The Dust Filter is supplied with the Imaging Unit (black). Replace it when replacing the Imaging Unit (black).

3.6 Replacing the unit

3.6.1 Replacing the 2nd Image Transfer Roller Unit

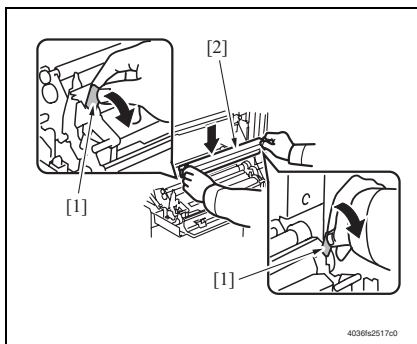
NOTE

- If a Finishing Option is installed, remove it from the main unit before trying to replace the Waste Toner Bottle.
- When removing the Finishing Option, support the horizontal transport unit with your hand to prevent it from dropping.



A. Removal Procedure

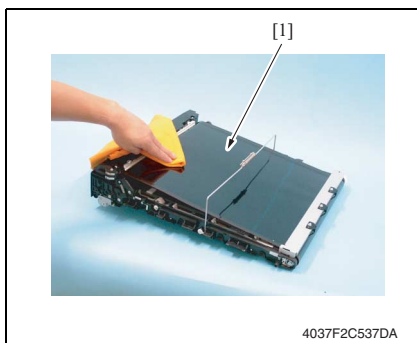
1. Turn OFF the main power switch.
2. Open the Right Door.
3. Unlock the blue lock levers [1] (at two places).
4. Holding onto the blue lock levers [1] (at two places), remove the 2nd Image Transfer Roller Unit [2].

**B. Reinstallation Procedure**

1. Holding onto the blue lock levers [1] (at two places), mount the 2nd Image Transfer Roller Unit [2].
2. Lock the blue lock levers [1] (at two places).
3. Close the Right Door.

NOTE

- **Make sure that the door is locked in position both at front and rear.**
- 4. Turn ON the Main Power Switch.
- 5. Select "Service Mode" → "Counter" → "Life" and clear the count of "Transfer Roller Unit."

3.6.2 Image Transfer Belt Unit**A. Cleaning Procedure**

1. Remove the Image Transfer Belt Unit.
2. Using a dried soft cloth, wipe the Transfer belt [1].

NOTE

- If it is difficult to clean with dried soft cloth, dampen a soft cloth with a solvent.
- Do not wipe out with water.
- When solvent is used to dampen a cloth, do not use the ones other than shown below: isopropyl alcohol, ethyl alcohol, PPC Cleaner, Sol mix AP-7
- After cleaned with the solvent, make copies more than 28-piece of A3 white paper to eliminate the image noise.

B. Replacing Procedure**NOTE**

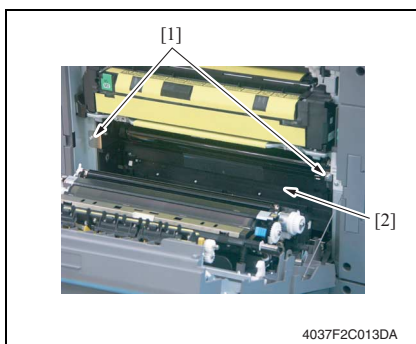
- If a Finishing Option is installed, remove it from the main unit before trying to replace the Transfer Belt Assembly.
- When removing the Finishing Option, support the horizontal transport unit with your hand to prevent it from dropping.

1. Turn OFF the main power switch.
2. Slide out the IU (C/M/Y/K).

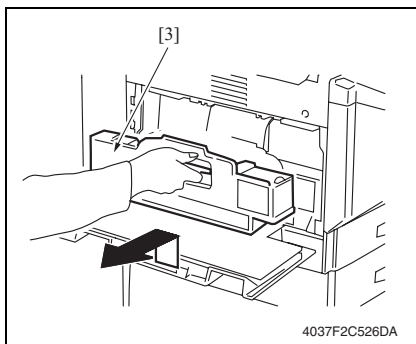
NOTE

- After the Imaging Unit has been removed from the main unit, be sure to place it in the plastic bag (black) or wrap it in a light shielding cloth, and store it in a dark place.

Do not leave the Imaging Unit exposed to light for a extended period of time, as it may become damaged.



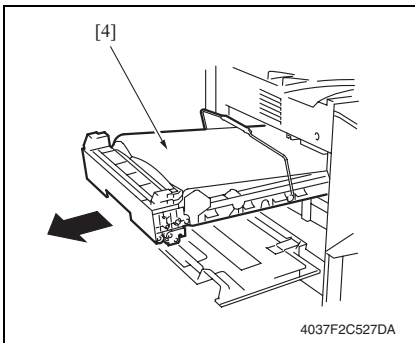
3. Open the Right Door.
4. Remove two Screws [1] and release the Lock of the Image Transfer Belt Unit [2].



5. Open the Left Door.
6. Grasp the handle, and remove the waste toner box [3].

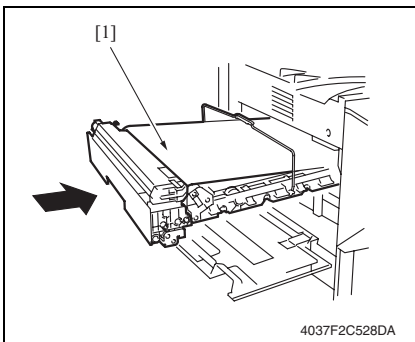
NOTE

- Raise the waste toner box gently before removing it.
- If scattered toner has accumulated in the vicinity of the toner collecting port, do not tilt the waste toner box when removing it.
- Do not leave the waste toner box in a tilted condition after removing it.



7. Pull out the Image Transfer Belt Unit [4].

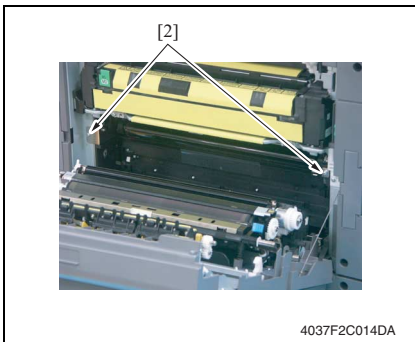
C. Reinstallation Procedure



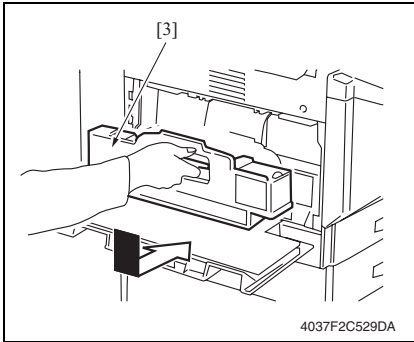
1. Insert the Transfer Belt Unit [1].

NOTE

- Insert the Transfer Belt Unit with care not to allow its docking gear to be damaged by hitting it against the rail or associated part.



2. Install the Image Transfer Belt Unit with two Screws [2].

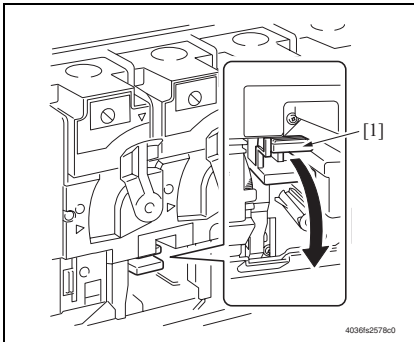


3. Hold the handle and install the Waste Toner Box [3] in position.
4. Close the Left Door.
5. Close the Right Door.

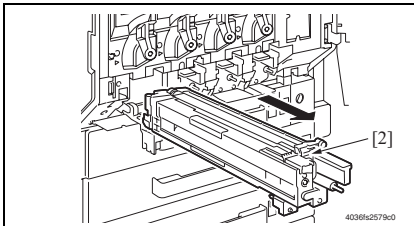
NOTE

- **Make sure that the door is locked in position both at front and rear.**
6. Turn ON the Main Power Switch.
 7. Select "Service Mode" → "Imaging Process Adjustment" → "Gradation Adjust" and carry out Gradation Adjust.

3.6.3 Replacing the Imaging Unit (C, M, Y, K)

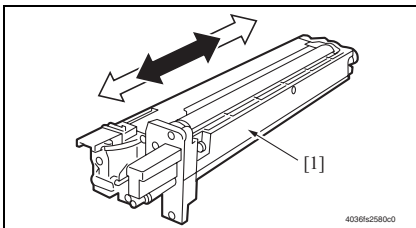
**A. Removal Procedure**

1. Turn OFF the Main Power Switch.
2. Unplug the power cord.
3. Open the Front Door.
4. Release the lock lever [1] of the Imaging Unit.



5. Pull out the IU [2], and remove it from main body.
6. Clean the LPH Assy.

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B. Reinstallation Procedure

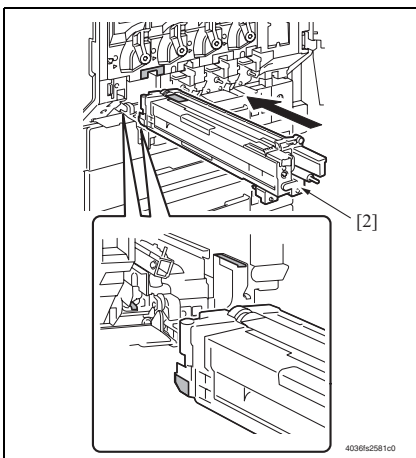
1. Remove the Imaging Unit from its plastic bag.
2. Tilt the Imaging Unit [1] to the left and shake it a small stroke in the tilt direction twice. Then, tilt it to the right and shake it a small stroke in the tilt direction twice.

NOTE

- Since the Imaging Unit is highly susceptible to light, keep it shielded from light up to the time it is installed.
- Carefully unseal the plastic bag (black).
- If the Imaging Unit is packed in the plastic bag (black) again, seal the package using tape or another means.

NOTE

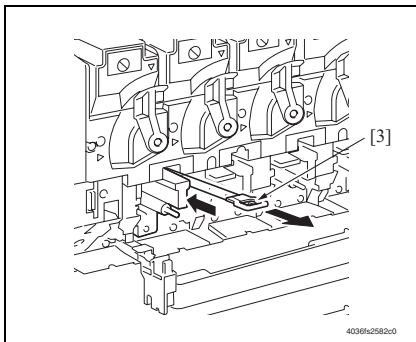
- When installing the Imaging Unit, ensure that the color of the mounting guide of the Imaging Unit is the same as the color of the label at the mounting position on the main unit.



3. Keeping the Imaging Unit [2] in a level position, insert the Imaging Unit [2] into the mounting position all the way until it is stopped.

NOTE

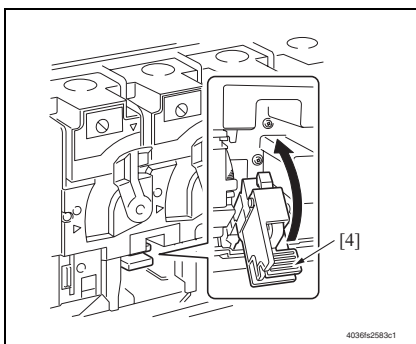
- Do not allow the Imaging Unit to become tilted while installing them into the Main Unit, as damage to the PC Drum or the LED assembly can result.
- Insert the Imaging Unit until a click is heard.



4. Pull out the PC Drum protective sheet [3] while pressing the IU.

NOTE

- **Pull out the PC Drum protective sheet half way, and pull it down slantwise.**



5. Close the Imaging Unit Locking Lever [4] while pressing the IU.

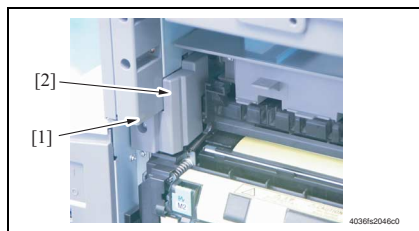
NOTE

- **Place the IU Lock Lever into the locked position until a click is heard.**
6. Close the Front Door.
 7. Plug in the power cord.
 8. Turn ON the Main Power Switch.
 9. Select "Service Mode" → "Imaging Process Adjustment" → "Gradation Adjust" and carry out Gradation Adjust.

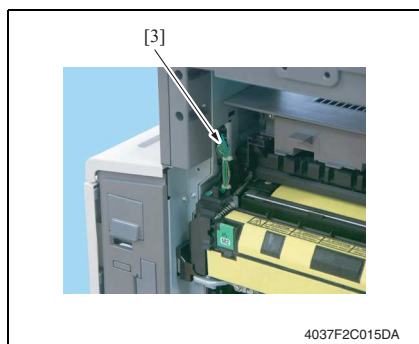
3.6.4 Replacing the Fusing Unit

NOTE

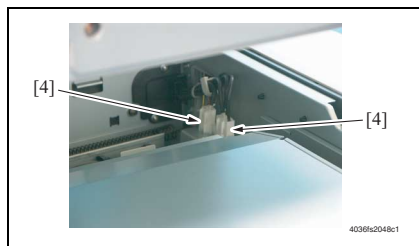
- Before replacing the Fusing Unit, ensure that it has had time to cool down.



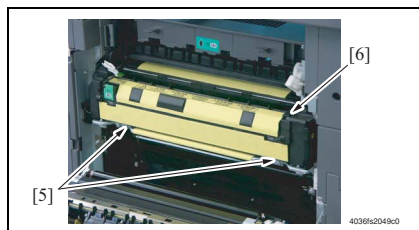
1. Turn OFF the main power switch and unplug the power cord from the power outlet, then wait for about 20 minutes.
2. Open the Right Door.
3. Remove the Screw [1], and remove the Connector protective cover [2].



4. Remove the Connector [3].



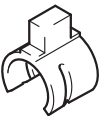

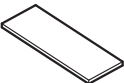
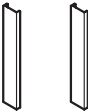

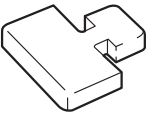
5. Remove the Exit Tray.
6. Remove wire saddle and remove two Connectors [4] of Fusing unit.



7. Remove two Screws [5], and remove the Fusing unit [6].

4. Service tool

4.1 CE Tool list

Tool name	Shape	Parts No.	Personnel	Remarks
Scanner Drive Cable Holding Jig	 4036fs2001c0	4581-7901-XX	2	
LED Cleaning Jig	 4036fs2002c0	4004-7502-XX	1	
LED Cleaning Jig Pad	 4036fs2003c0	4004-7503-XX	1	
LPH Assy Mounting Jigs	 4036fs2004c0	4025-7901-XX	2	
Color chart	 4036fs2577c0	—	1	
Safety Switch Holding Jig	 4036fs2184c0	1174-7901-XX	1	

4.2 Copy materials

4.2.1 Imaging Unit Single Parts (IU)

Also replace the Dust filter packed in the Imaging Unit Black at the same time.

Parts name	Replacing period
IU Black	100,000 copies
IU Yellow	50,000 copies
IU Magenta	50,000 copies
IU Cyan	50,000 copies

 For the predetermined conditions, see page 14.

4.2.2 Toner Cartridge Single Parts (T/C)

Also replace the Deodorant filter packed in the T/C Black at the same time.

Parts name	Replacing period *1
T/C Black	11,500 copies
T/C Yellow	11,500 copies
T/C Magenta	11,500 copies
T/C Cyan	11,500 copies

*1: Life value that can be achieved with a probability of 90% even with product-to-product variations and fluctuating operating environmental conditions taken into consideration, when the T/C is used under the conditions of B/W ratio 5% for each color

4.2.3 Waste Toner Box

Parts name	Replacing period
Waste Toner Box	30,000 copies

 For the predetermined conditions, see page 14.

4.2.4 Maintenance Kit

There is no setting for the Maintenance Kit.

5. Firmware upgrade

5.1 Preparations for Firmware rewriting

5.1.1 Service environment

- OS: Windows 2000
- Drive which enables writing/reading of Compact flash
- Compact flash (with 128MB or more)

5.1.2 Application to be used

- Cygwin (Free software)

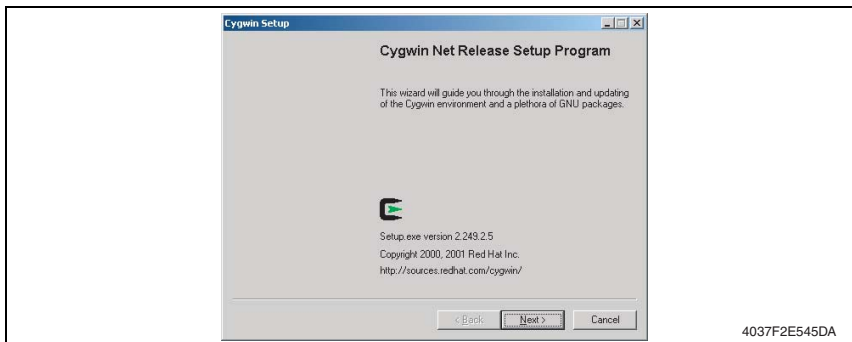
5.1.3 Installing the Cygwin

- The software for writing the Firmware into Compact flash is installed into the PC.

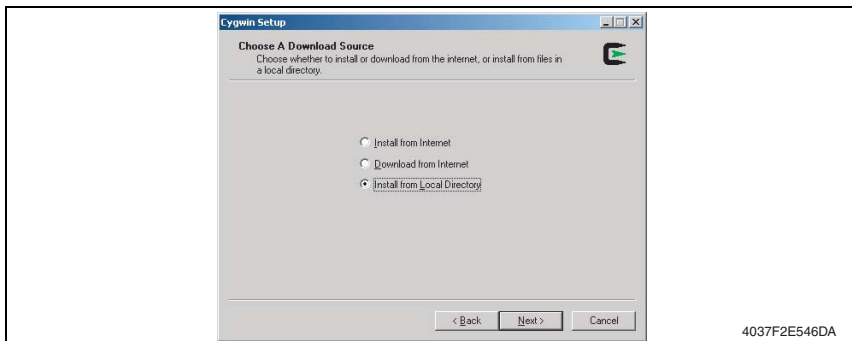
1. Double click the [setup.exe] on CD-ROM in which Cygwin is stored.



2. Click [Next (N)].



3. Select "Install from Local Directory", and click [Next (N)].

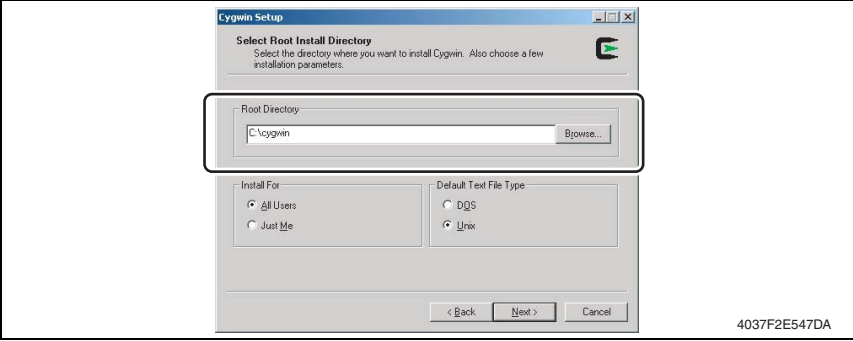


4. Specify the folder for installation.
Check to make sure that “Root Directory” is in default setting, [C:\cygwin].

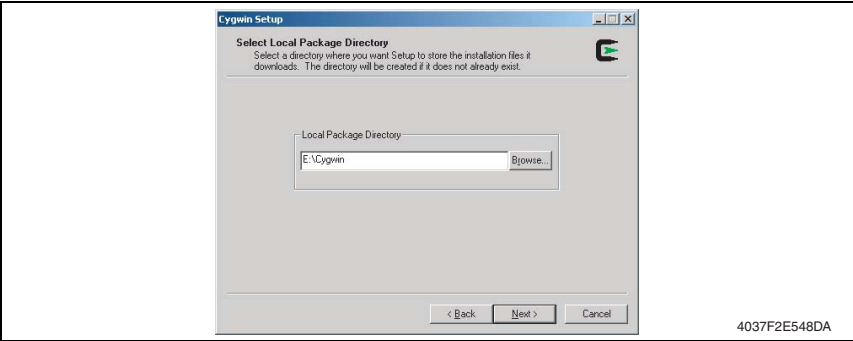
NOTE

- **Make sure to check that “Root Directory” is in default setting, [C:\cygwin].**
- **Do not change the setting value except “Root Directory.”**

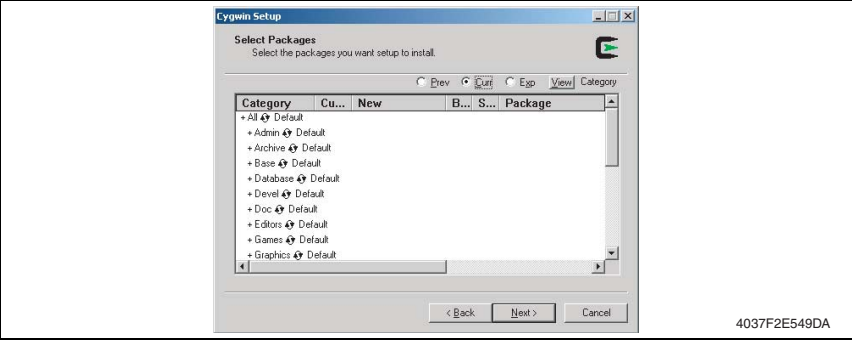
5. Click [Next (N)].



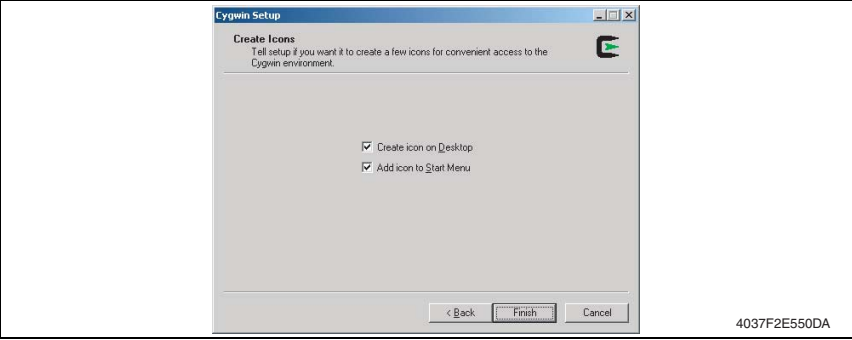
6. Specify the place of the data to be installed.
For installing from CD-ROM, select the [cygwin] folder in CD-ROM drive.
(Described below is the sample procedure when CD-ROM drive is E-drive.)
7. Click [Next (N)].



8. Click [Next (N)].

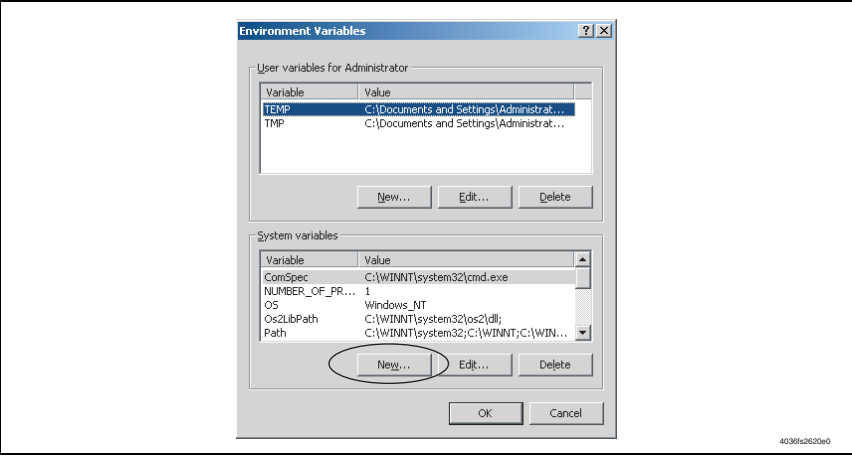


9. Click [Complete] to start installing.



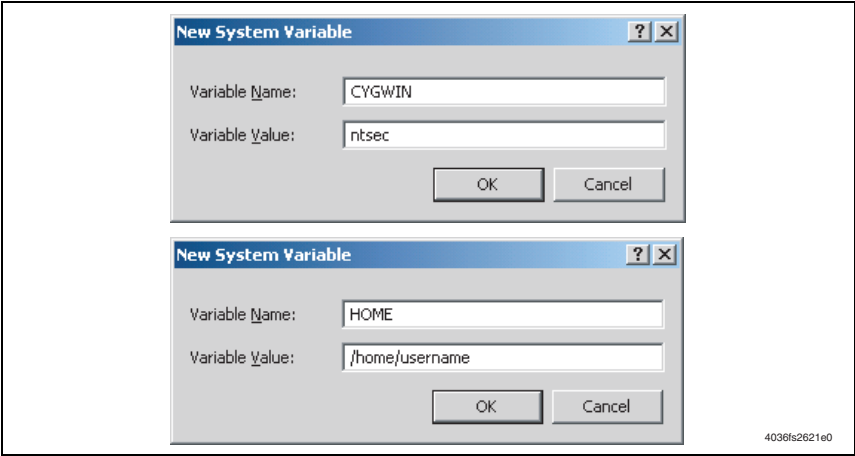
10. After installing, open the Property of “My Computer”, and click the “Environmental Variable” of “Advanced” tab.

11. Click the “New” in System Variable Setting.



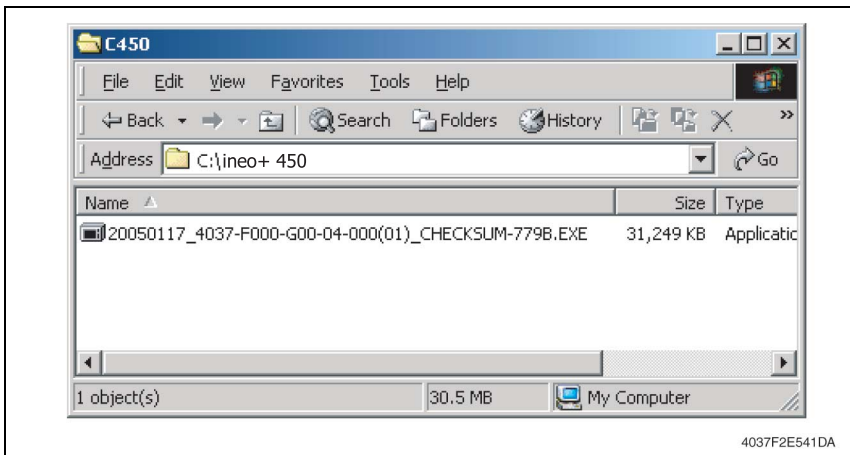
12. Set the following two values as the Windows Environmental Variable.

Variable name	Variable value
CYGWIN	ntsec
HOME	/home/username



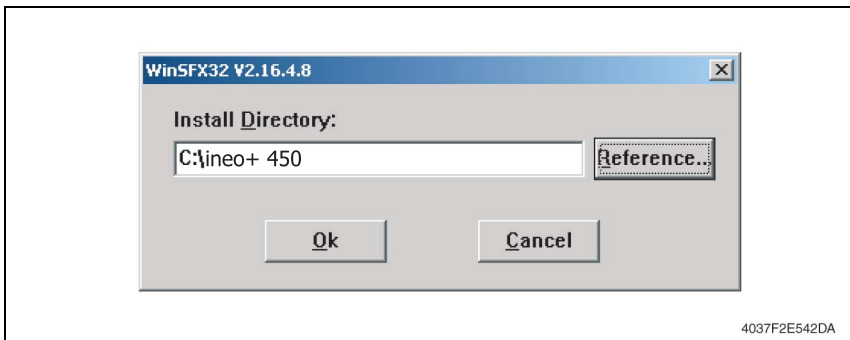
5.1.4 Writing into the Compact flash

1. Put the data of Firmware in the optional directory. (C:\ineo+ 450 in the below figure)



NOTE

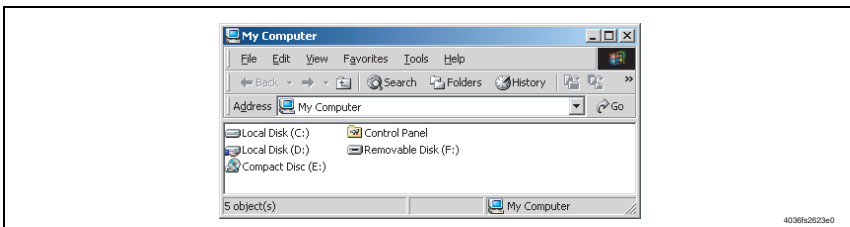
- The file name of Firmware data consists of the “Release Date_Version_CHECKSUM-****.exe.”
2. Double-click the Firmware data, and specify the directory to be uncompressed, and then uncompress it.



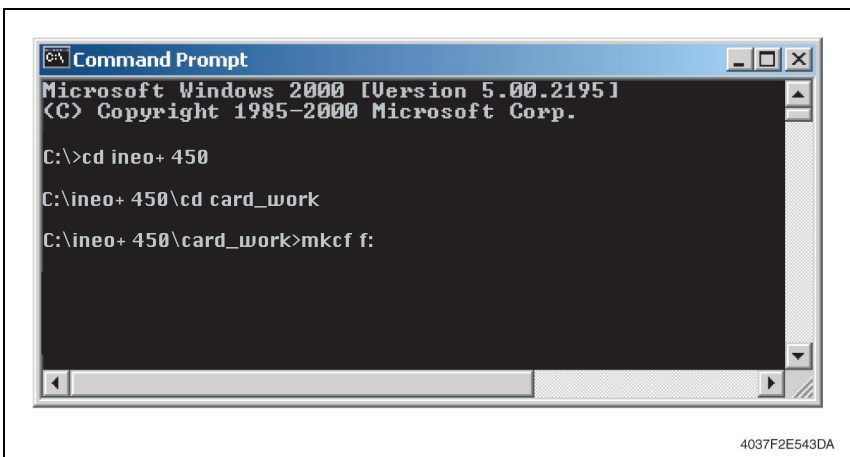
NOTE

- When old Firmware is still left in the specified directory to be uncompressed, delete it before uncompressing.

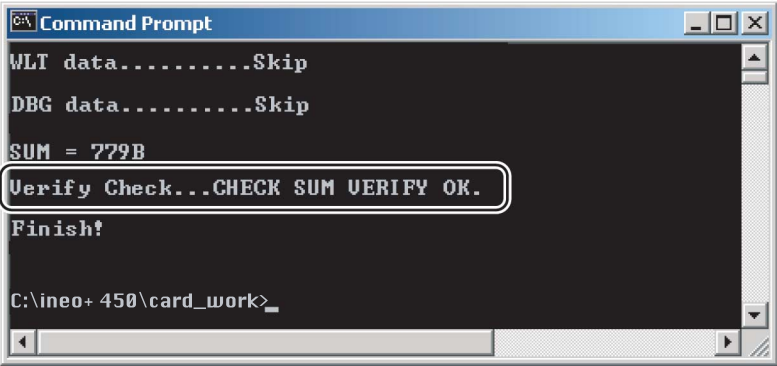
3. Mount the Compact flash on the PC, and check the Drive name, which was recognized in the Windows. (F-drive in the following figure)



4. Click "Start" → "Program" → "Accessories" → "Command Prompt" to open the Command Prompt.
5. Use the Command prompt to move into the uncompressed directory.
6. Specify the Drive of Compact flash, which was recognized through the procedure 3, and execute the "mkscf.bat." (Input the C: \ineo+ 450\card_work>mkscf f (Drive number): in the below figure, and push the "Enter".)



7. Once the "mkcf.bat" is executed, data writing into the Compact flash is started.
8. Upon completion of writing, CHECKSUM is executed. If CHECKSUM value is precisely matched, "VERIFY OK" appears.



```
C:\ Command Prompt
WLT data.....Skip
DBG data.....Skip
SUM = 779B
Verify Check...CHECK SUM VERIFY OK.
Finish!
C:\ineo+ 450\card_work>
```

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9. Remove the Compact flash from PC.

NOTE

- When removing the Compact flash, be sure to check if data is written as normal and then remove it according to the precise removing method.

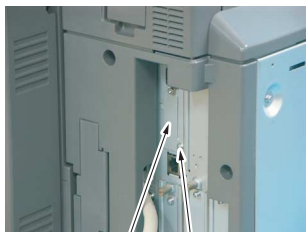
5.2 Firmware rewriting

- The F/W is updated using the Compact flash.

5.2.1 Updating method

NOTE

- NEVER** remove or insert the Compact Flash card with the machine power turned ON.

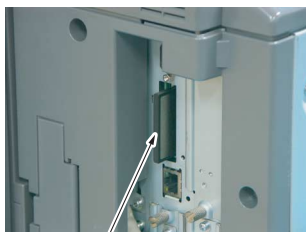


[2]

[1]

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1. With the main power switch in the OFF position, unplug the power cord from the power outlet.
2. Remove the screw [1] and the metal Blanking Plate [2].



[3]

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3. Insert the Compact Flash card into the slot.

4. Plug the power cord into the power outlet and turn ON the main power switch.
5. Up to six types of F/W will be displayed on the control panel.
6. Select the particular type of F/W to be updated.

Firmware Update	
MFP Controller	Fax Board Controller1
<input type="button" value="YES"/> <input type="button" value="NO"/>	<input type="button" value="YES"/> <input type="button" value="NO"/>
Scanner	Fax Board Controller2
<input type="button" value="YES"/> <input type="button" value="NO"/>	<input type="button" value="YES"/> <input type="button" value="NO"/>
Printer	
<input type="button" value="YES"/> <input type="button" value="NO"/>	
LPH	
<input type="button" value="YES"/> <input type="button" value="NO"/>	<input type="button" value="Start"/>

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- 7. Press the Start key. (At this time, the Start key starts blinking red.)
- 8. Check that the Touch Panel shows the message indicating that the data has been rewritten correctly ("Downloading Completed"). Check also the Check Sum value ("Check Sum XXXX") shown on the Touch Panel. (The Start key blinks green.)
- 9. Turn OFF the main power switch.
- 10. Unplug the power cord from the power outlet.
- 11. Remove the Compact Flash card from the slot.
- 12. Plug the power cord and turn ON the main power switch.
- 13. Call the Service Mode to the screen.
- 14. Select "Firmware Version".
- 15. Make sure if the version of Firmware is updated.

5.2.2 Action When Data Transfer Fails

- If "NG" appears on the Touch Panel, indicating that rewriting has been unsuccessful (in which case the Start key lights up red), take the following steps.
 - 1. Perform the data rewriting procedure again.
 - 2. If the procedure is abnormally terminated, change the memory card for a new one and try another rewriting sequence.
 - 3. If the procedure is still abnormally terminated, change the board that has caused "NG" and carry out data rewriting procedure.

MFP Controller	MFP Control Board (PWB-MFPC)
Scanner	Image Processing Board (PWB-C)
Printer	Control Board (PWB-MC)
LPH	LED Drive Board (PWB-LED)
Fax Board Controller1	Fax Board *1
Fax Board Controller2	Not Used

*1: The Optional FAX kit is necessary for the above procedure.

6. Other

6.1 Disassembly/Adjustment prohibited items

A. Paint-locked Screws

NOTE

- Paint-locked screws show that the assembly or unit secured can only be adjusted or set at the factory and should not be adjusted, set, or removed in the field.

B. Red Painted Screws

NOTE

- When the screws are removed, the red paint is coated on the points where readjustment is required.
- Once the red painted screw is removed or loosened, you should make adjustment. Accordingly check the adjustment items in operation manual and make necessary adjustment. Note that when two or more screws are used on the part in questions, only one representative screw may be marked with red paint.

C. Variable Resistors on Board

NOTE

- Do not turn the variable resistors on boards for which no adjusting instructions are given in Adjustment/Setting.


























D. Removal of PWBs

NOTE





















- When removing a circuit board or other electrical component, refer to “Handling of PWBs” and follow the corresponding removal procedures.
- The removal procedures given in the following omit the removal of connectors and screws securing the circuit board support or circuit board.
- Where it is absolutely necessary to touch the ICs and other electrical components on the board, be sure to ground your body.

6.2 Disassembly/Assembly/Cleaning list (Other parts)














6.2.1 Disassembly/Assembly parts list

No.	Section	Part name	Ref. Page
1	Exterior parts	Original Glass	 55
2		IR Upper Right Cover	 54
3		Control Panel	 56
4		IR Front Cover	 55
5		IR Upper Front Cover	 54
6		IR Left Cover	 52
7		IR Upper Left Cover	 54
8		IR Upper Rear Cover	 54
9		IR Right Cover	 51
10		Rear Left Cover	 52
11		Panel Cover	 53
12		Front Door	 53
13		Front Left Cover	 52
14		Front Right Cover	 51
15		Rear Cover	 53
16		Rear Right Cover	 53
17		Exit Tray	 52
18		Tray 1	 57
19		Tray 2	 58
20		Tray 1 Front right cover	 53
21		Lower Rear Cover	 53
22		Tray 2 Rear Cover	 53
23		Tray 2 Rear Right Cover	 52
24		Multi Bypass Right Cover	 51
25		Multi Bypass Left Cover	 51

No.	Section	Part name	Ref. Page
26	Board and etc.	Scanner Motor Drive Board	ES 58
27		CCD Unit	ES 59
28		Image Processing Board	ES 60
29		Copier Board	ES 62
30		LAN Board	ES 63
31		Standard Memory	ES 64
32		Hard Disk Drive	ES 64
33		Electronic Sorting Board	ES 65
34		MFP Control Board	ES 66
35		Control Board	ES 67
36		Slide Interface Board	ES 68
37		High Voltage Unit/1	ES 70
38		High Voltage Unit/2	ES 71
39		Tray 1 Paper Size Board	ES 72
40		DC Power Supply	ES 72
41	Board and etc.	LED Drive Board	ES 74
42		Tray 2 Board	ES 75
43		Tray 2 Paper Size Board	ES 75
44		Inverter Board	ES 76
45	Unit	Multi Bypass Unit	ES 77
46		Hopper Unit	ES 78
47		LPH Unit	ES 80
48	IR	Scanner Motor	ES 83
49		Scanner Assy	ES 85
50		Scanner Wire	ES 86

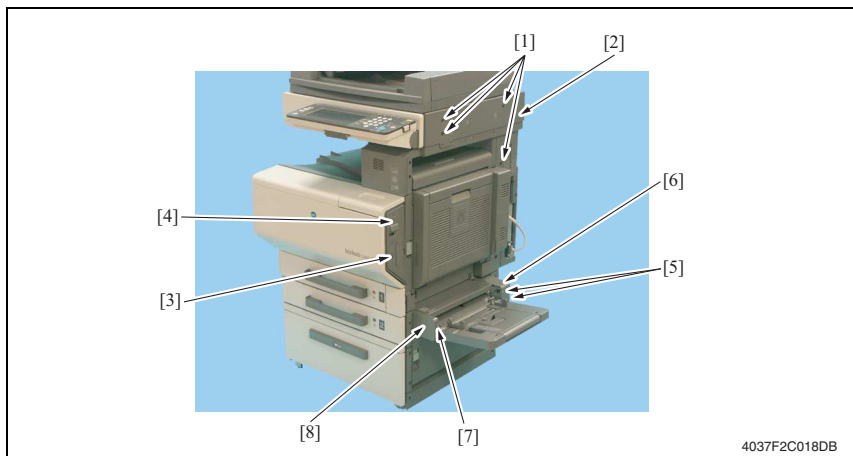
No.	Section	Part name	Ref. Page
51	Others	PWB Unit	 93
52		PWB Box	 94
53		Main Motor	 97
54		Fusing Drive Motor	 97
55		Toner Supply Motor C/K	 98
56		Toner Supply Motor Y/M	 99
57		Tray 2 Lift-Up Motor	 99
58		Tray 2 Paper Feed Motor	 100
59		Tray 2 Vertical Transport Motor	 101
60		Color PC Drum Motor	 102
61		Color Developing Motor	 104
62		K PC Motor	 105
63		1st Image Transfer Pressure/Retraction Motor	 106
64		2nd Image Transfer Pressure/Retraction Motor	 107
65		Intermediate Transport Motor	 108
66		Fusing Pressure Roller Pressure/Retraction Motor	 110
67		Cleaning Brush Motor	 113
68		IDC/Registration Sensor/1,2	 115
69		LPH Assy	 116
70		ATDC Sensor Y/M/C	 120

6.2.2 Cleaning parts list

No.	Section	Part name	Ref. Page
1	Tray 1	Paper Take-up Roller	 121
2		Separation Roller	 121
3	Bypass	Paper Take-up Roller	 122
4		Separation Roller	 122
5	Tray 2	Paper Take-up Roller	 123
6		Pick-up Roller	 123
7		Separation Roller	 123
8		Transport Roller	 125
9	IR	Scanner Rail	 125
10		Mirrors (1st/2nd/3rd)	 126
11		Lens	 126
12		Original Glass	 127
13		CCD Sensor	 127

6.3 Disassembly/Assembly procedure

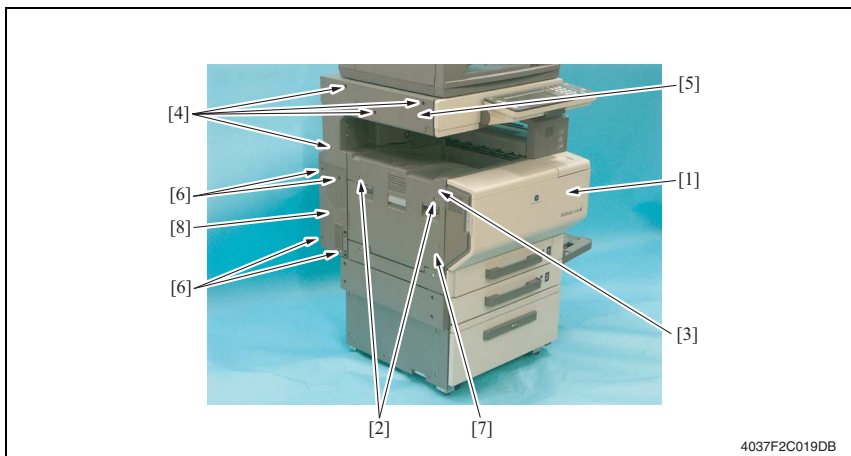
6.3.1 IR Right Cover/Front Right Cover/Bypass Right & Left Cover



1. Remove four Screws [1], and remove the IR Right Cover [2].
2. Remove the Panel Cover.
3. Remove the Screw [3], and remove the Front Right Cover [4].
4. Remove two Screws [5], and remove the Bypass Right Cover [6].
5. Remove the Screw [7], and remove the Bypass Left Cover [8].

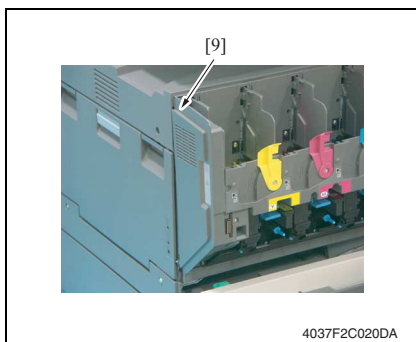
 **53**

6.3.2 Exit Tray/IR Left Cover/Rear Left Cover/Left Front Cover



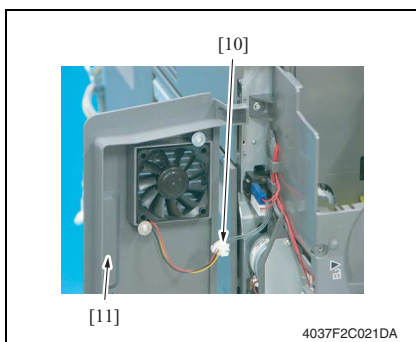
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1. Open the Front Door [1].
2. Remove two Screws [2], and remove the Exit Tray [3].
3. Remove four Screws [4], and remove the IR Left Cover [5].
4. Remove four Screws [6].
5. Open the Left Door [7], and remove the Rear Left Cover [8].



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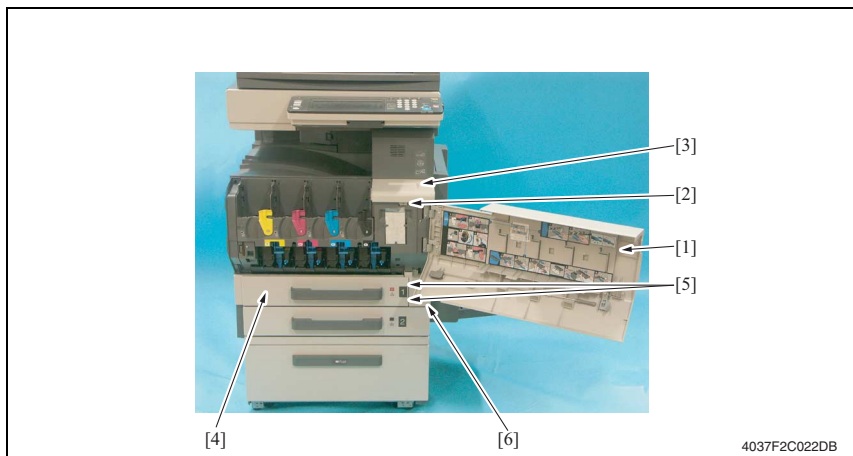
6. Remove the Screw [9].



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7. Remove Connectors [10] and the Left Front Cover [11].

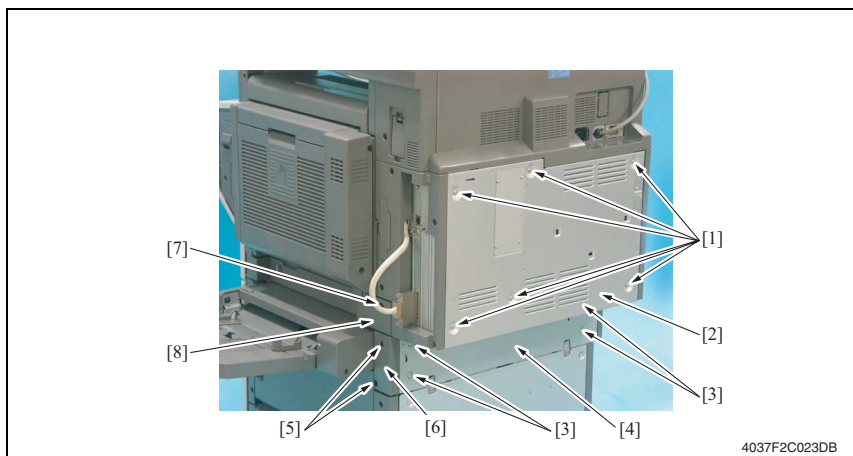
6.3.3 Front Door/Panel Cover/Tray 1 Front Right Cover



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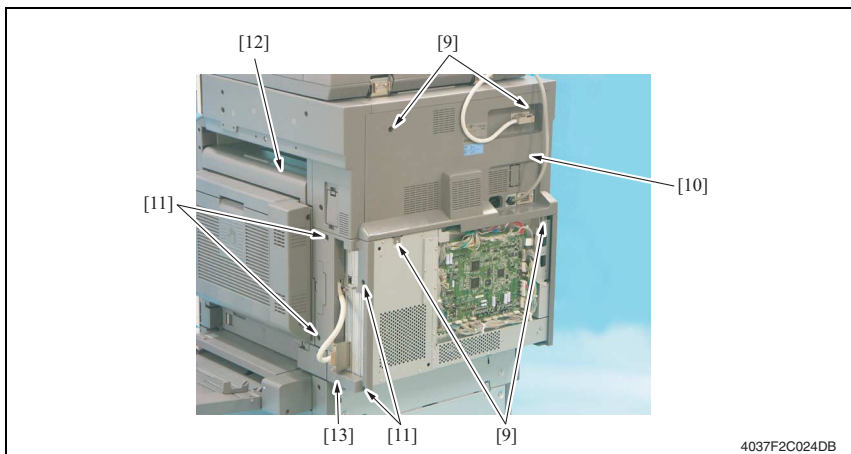
1. Open the Front Door [1].
2. Remove the Screw [2], and remove the Panel Cover [3].
3. Pick up the Front Door [1] and remove it.
4. Pull out the Tray 1 [4].
5. Remove two Screws [5], and remove the Tray 1 Front Right Cover [6].

6.3.4 Lower Rear Cover/Tray 2 Rear Cover/Rear Cover/Rear Right Cover/Tray 2 Rear Right Cover/Wiring Cover



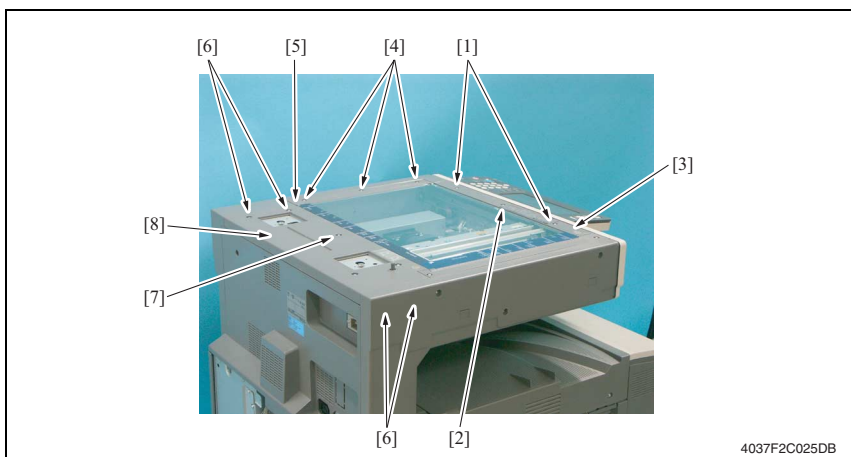
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1. Remove six Screws [1], and remove the Lower Rear Cover [2].
2. Remove four Screws [3], and remove the Tray 2 Rear Cover [4].
3. Remove two Screws [5], and remove the Tray 2 Rear Right Cover [6].
4. Remove the Screw [7], and remove the Wiring Cover [8].



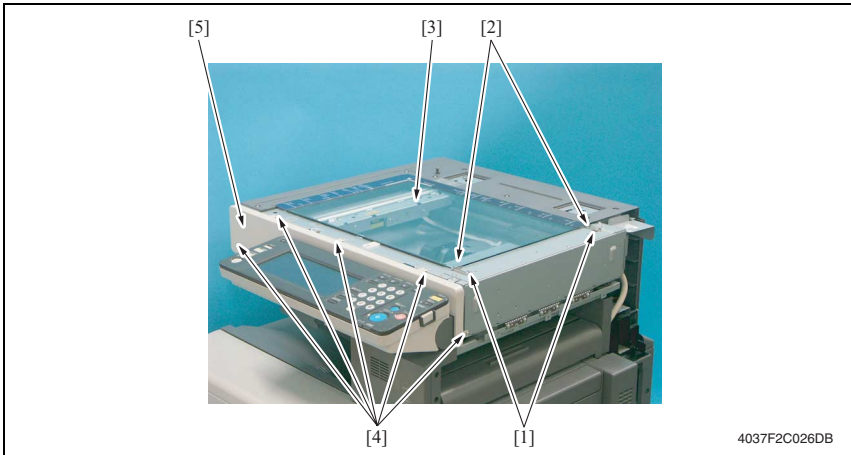
5. Remove four Screws [9], and remove the Rear Cover [10].
6. Remove four Screws [11].
7. Open the Right Door [12], and remove the Rear Right Cover [13].

6.3.5 IR Upper Front Cover/IR Upper Right Cover/IR Upper Rear Cover



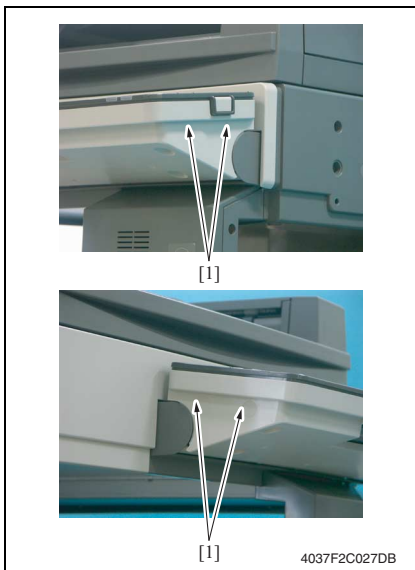
1. Remove two Shoulder Screws [1] and a Screw [2], and remove the IR Upper Front Cover [3].
2. Remove three Screws [4], and remove the IR Upper Right Cover [5].
3. Remove four Shoulder Screws [6] and three Screws [7], and remove the IR Upper Rear Cover [8].

6.3.6 Original Glass/IR Front Cover

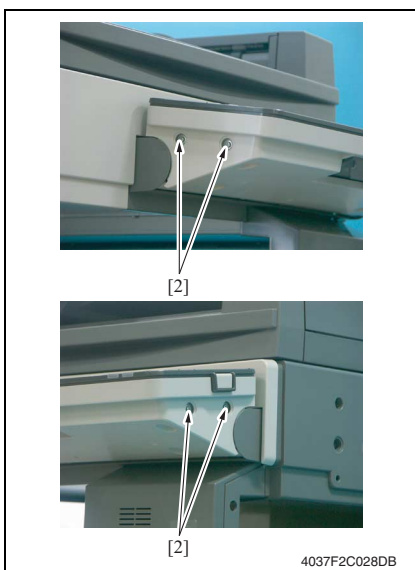


1. Remove the IR Upper Right Cover.
E38° 54
2. Remove each Screw [1], and remove the Original Glass fixing bracket (near side/ inmost side) [2].
3. Remove the Original Glass [3].
4. Remove the IR Right Cover and IR Upper Front Cover.
E38° 51, 54
5. Remove the IR Left Cover.
E38° 52
6. Remove five Screws [4], and remove the IR Front Cover [5].

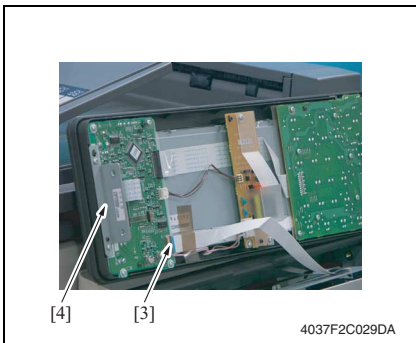
6.3.7 Control Panel (UN201)



1. Remove four caps [1] at both ends of Control Panel.

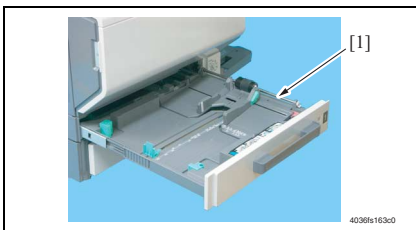


2. Remove four Screws [2].

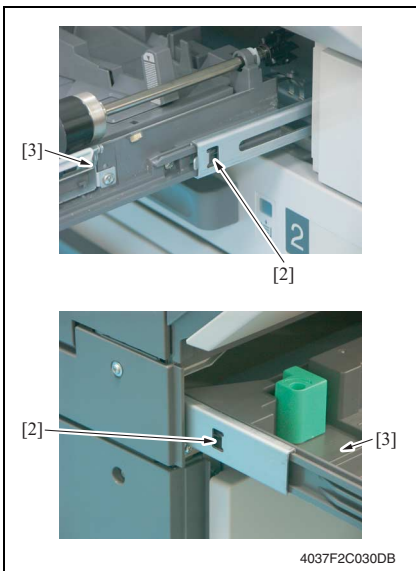


3. Remove the Flat Cable [3].
4. Remove the Control Panel [4].

6.3.8 Tray 1

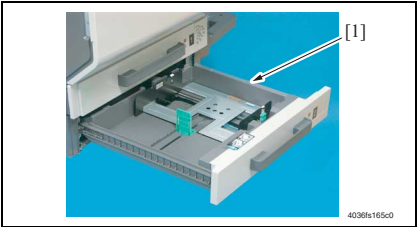


1. Slide out the Tray 1 [1].

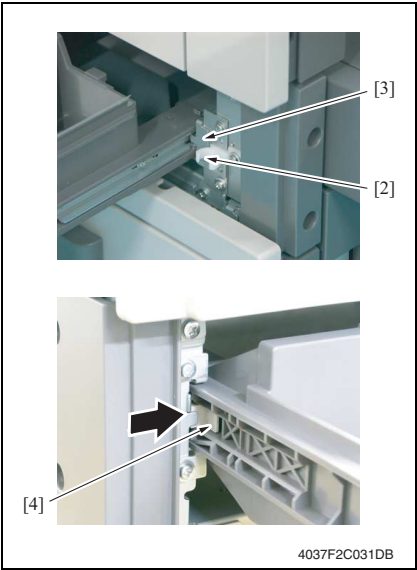


2. Slide out the Tray 1 [3] while pressing the Slide Locks [2] at both ends.

6.3.9 Tray 2

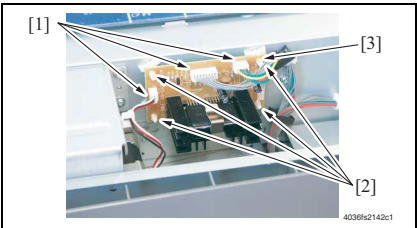


1. Slide out the Tray 2 [1].



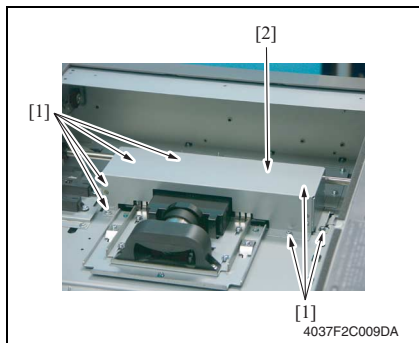
2. Remove one Screw [2], and remove the Stopper [3].
3. Slide out the Tray 2 while pressing the Slide Locks [4].

6.3.10 Scanner Motor Drive Board (PWB-IC)



1. Remove the IR Upper Rear Cover.
2. Remove three Connectors [1] and four Board Supports [2].
3. Remove the Scanner Motor Drive Board [3].

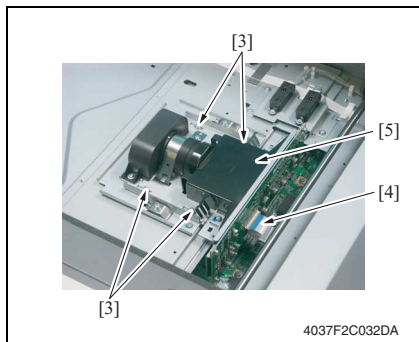
6.3.11 CCD Unit



A. Removal Procedure

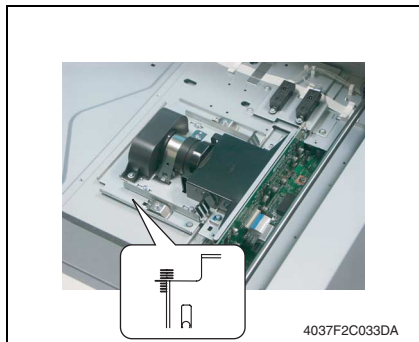
1. Remove the Original Glass.
2. Remove seven Screws [1], and remove the CCD Unit Cover [2].

3. Remove four Screws [3] and Flat Cable [4], and remove the CCD Unit [5].



B. Reinstallation Procedure

1. Align the CCD Unit with the center of the graduations as illustrated on the left and then tighten the four screws.



2. Reinstall the Original Glass.
3. Turn ON the main power switch.

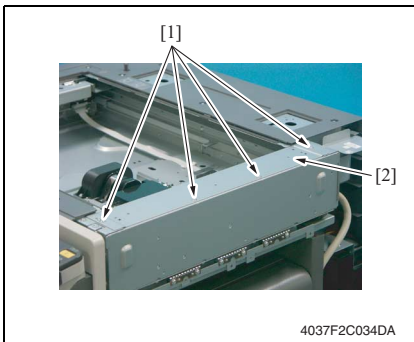
4. Carry out the Cross Direction Adjustment. If the specifications are not met, loosen the CCD Unit mounting screws and move the CCD Unit in the sub scan direction as necessary.



 233

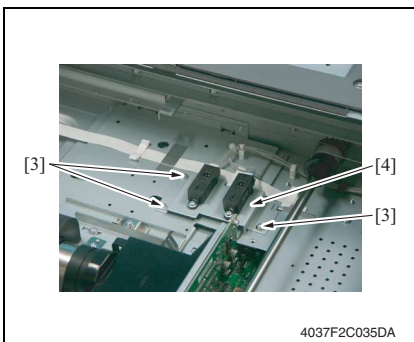
NOTE

- Hold the CCD Unit by hand when moving it. NEVER use a screwdriver or similar tool to tap to move it, as a varied distance between the CCD sensor and lens results.
- When CCD unit is replaced, “Scan Calibration” and “Line Mag” Setting under System 2 available in Service Mode should be OFF.

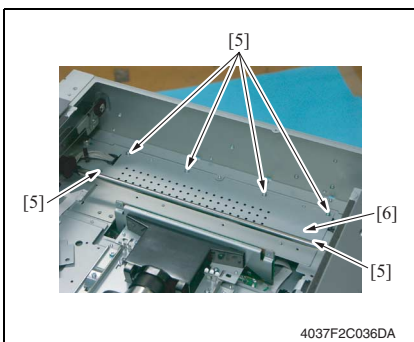
6.3.12 Image Processing Board (PWB-C)



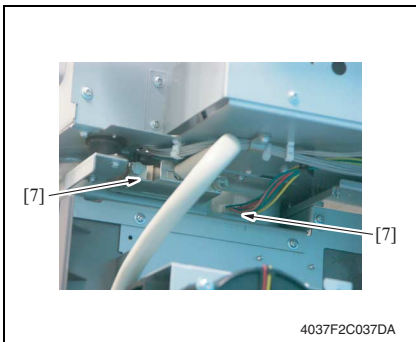
1. Remove the Rear Cover and IR Right Cover.
-  53
2. Remove the CCD Unit Cover.
-  Refer to the step1 on page 127.
3. Remove four Screws [1], and remove the IR Frame Protective Cover [2].



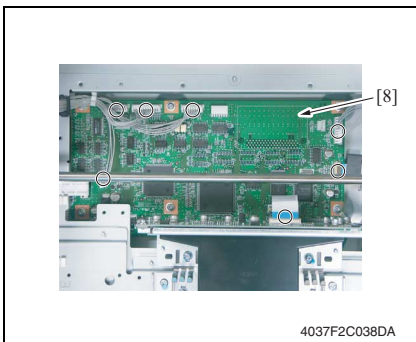
4. Remove three screws [3], and remove the Original Size Detection Sensor Assy [4].



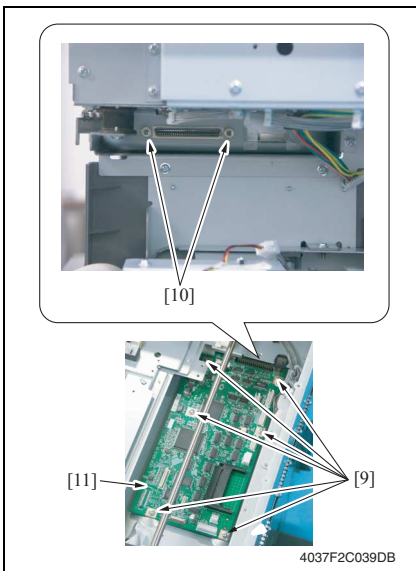
5. Remove six screws [5], and remove the Board cover [6].



6. Remove two connectors [7].



7. Remove all the Connectors and Flat Cables on the Image Processing Board [8].



8. Remove six Screws [9] and two Bolts [10], and remove the Image Processing Board [11].

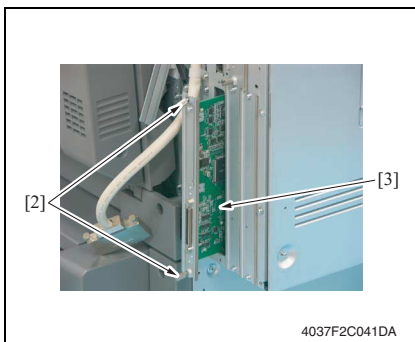
NOTE

- **When the Image Processing Board is to be replaced, rewriting the Firmware to the latest one.**

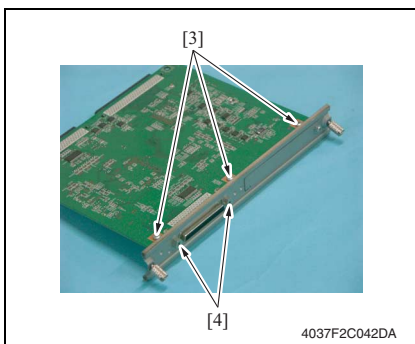
6.3.13 Copier Board (PWB-CF)



1. Remove the right rear cover
2. Remove the connector [1].

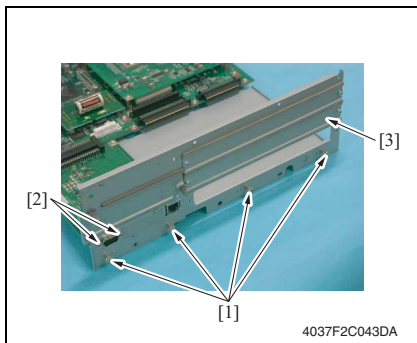


3. Loosen two screws [2], and pull out the Copier Board Assy [3].

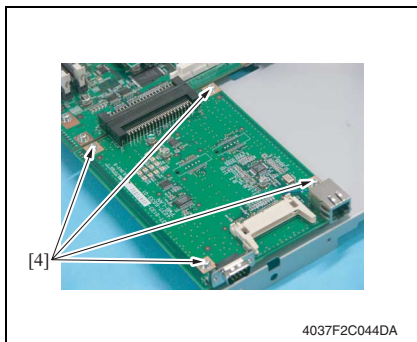


4. Remove three screws [4] and two hex-head screws [5].

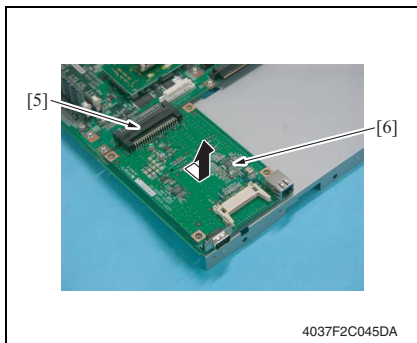
6.3.14 LAN Board (PWB-LAN)



1. Remove the PWB Unit.
2. Pull out the Copier Board.
3. Remove four screws [1] and two hex-head screws [2]. Remove the Interface Cover [3].

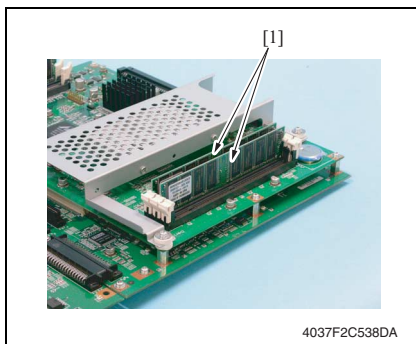



4. Remove four screws [4].



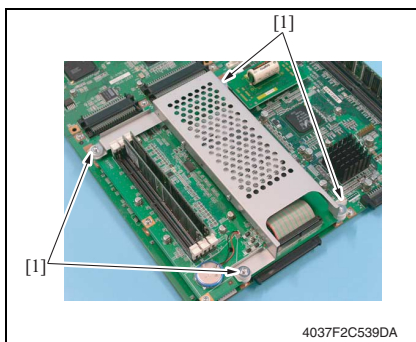
5. Remove the Interface connector [5] and LAN Board [6].


6.3.15 Standard Memory (D_FILE0)

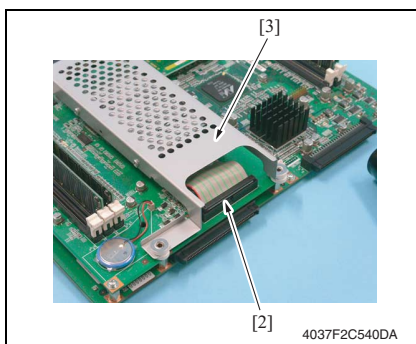


1. Remove the PWB Unit.
 **93**
2. Remove two Standard memories [1].

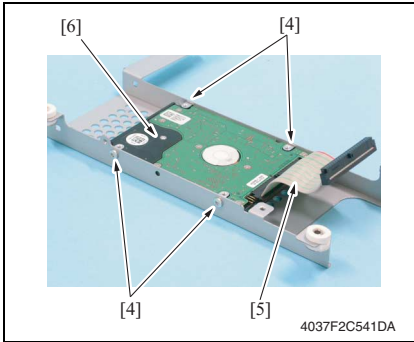
6.3.16 Hard Disk Drive (HDD)



1. Remove the PWB Unit.
 **93**
2. Remove four screws [1].



3. Remove the Flat cable [2] and the Hard Disk Drive Assy [3].

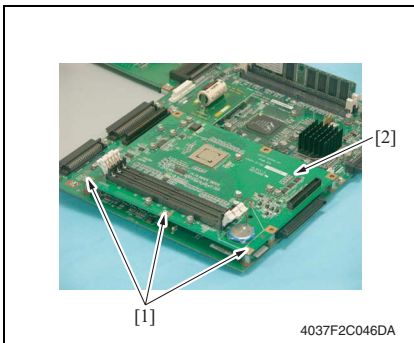


4. Remove four screws [4] and the Flat cable [5]. Remove the Hard Disk Drive [6].

NOTE

- When the Hard Disk is replaced, select “State Confirmation” → “Memory/HDD Adj.” → “HDD Format” in Service Mode for Logical format.

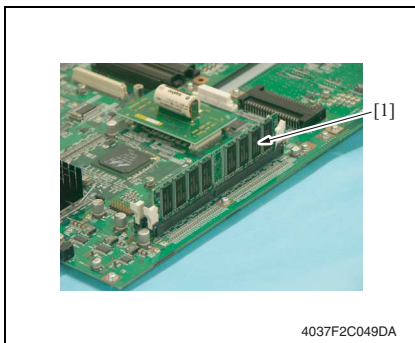
6.3.17 Electronic Sorting Board (PWB-ES)



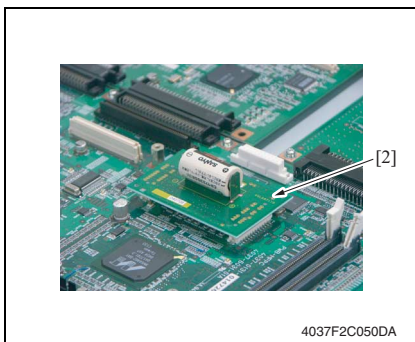
1. Remove the PWB Unit.
2. Remove three screws [1] and the Electronic sorting Board [2].

 93

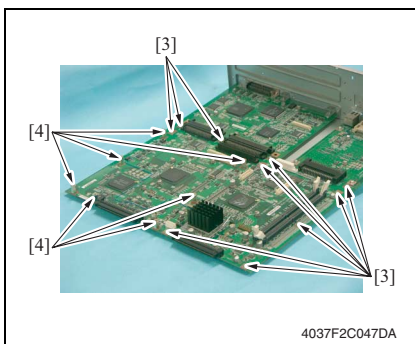
6.3.18 MFP Control Board (PWB-MFPC)



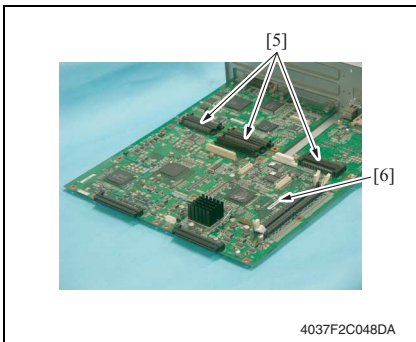
1. Remove the PWB Unit.
2. Remove the Electronic sorting Board.
3. Remove the work memory [1] on the MFP Control Board.



4. Remove the NVRAM [2] on the MFP Control Board.



5. Remove three screws [3] and seven shoulder screws [4].




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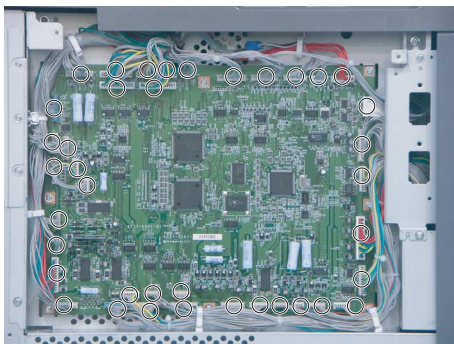
6. Remove three Interface connectors [5] and the MFP Control Board [6].

Note on replacing the MFP Control Board

- When the MFP Control Board is replaced, mount the removed Backup RAM to the new MFP Control Board.
- When the MFP Control Board is replaced, make sure to update the firmware.

6.3.19 Control Board (PWB-MC)

1. Remove the Lower Rear Cover.
-  **53**
2. Remove all the Connectors on the Control Board.

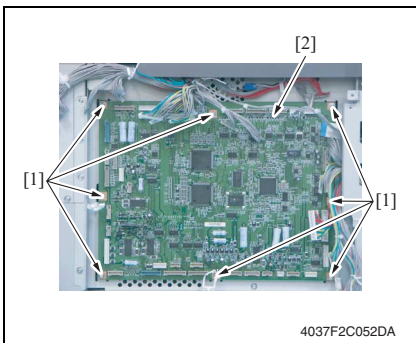


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3. Remove eight Screws [1], and remove the Control Board [2].

NOTE

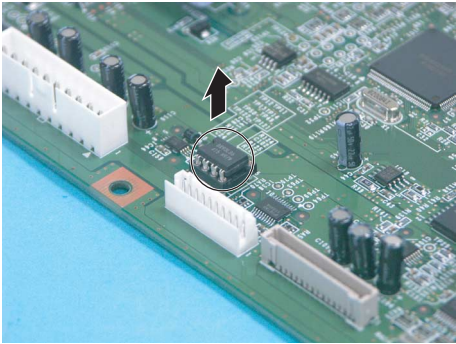
- When the Control Board is to be replaced, rewriting the Firmware to the latest one.



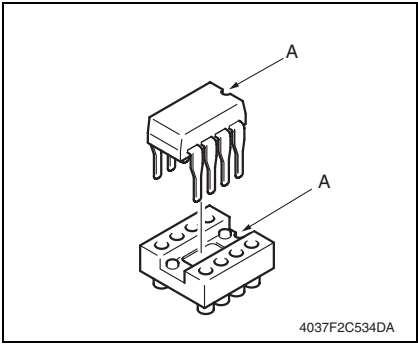
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Cautions in replacing the Control Board:

- When Control Board (PWB-MC) is replaced, relocate the Parameter Chip (IC40). Mount the Parameter Chip (IC40) of old Control Board onto the new Control Board.



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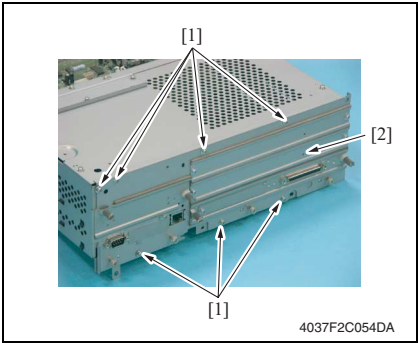


4037F2C534DA


NOTE

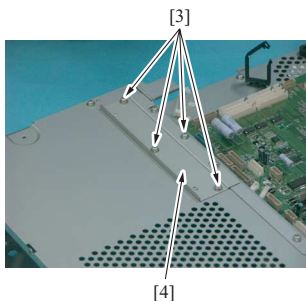
- When the Parameter Chip (IC40) is mounted, precisely fit the directions of each "A".

6.3.20 Slide Interface Board (PWB-SIF)



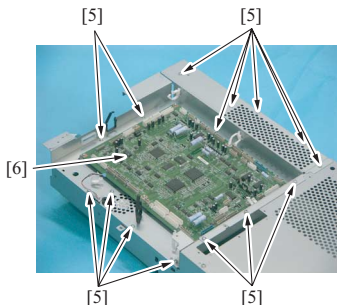
4037F2C054DA

1. Remove the PWB Box.
 94
2. Remove seven screws [1] and the Board Unit [2].



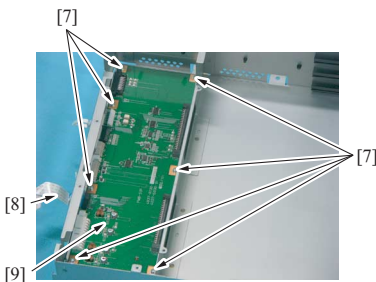
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3. Remove four screws [3] and the cover [4].



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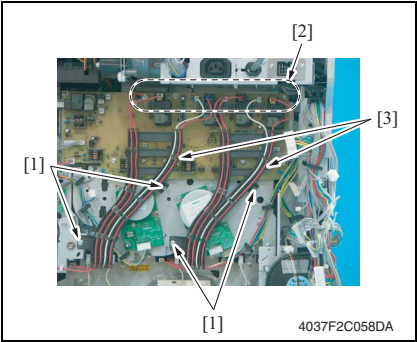
4. Remove fifteen screws [5] and the Control Board Assy [6].




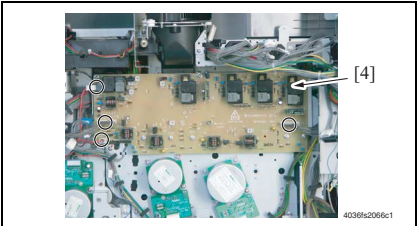
4037F2C057DA

5. Remove seven screws [7] and the Flat cable [8]. Remove the Slide Interface Board [9].

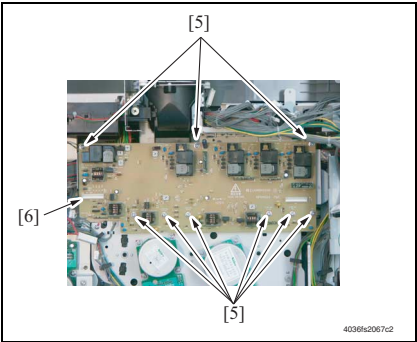
6.3.21 High Voltage Unit/1 (HV1)



1. Remove the PWB Box.
 **94**
2. Remove four Screws [1] and eight Connectors [2], and remove two Harness Holder [3].

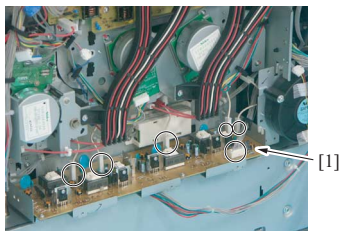


3. Remove all the Connectors on the High Voltage Unit/1 [4].



4. Remove 9 Screws [5], and remove the High Voltage Unit/1 [6].

6.3.22 High Voltage Unit/2 (HV2)

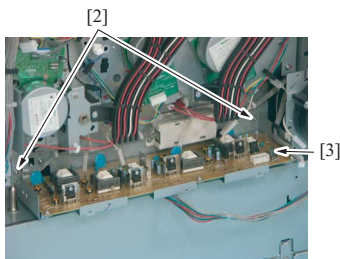


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1. Remove the PWB Box.

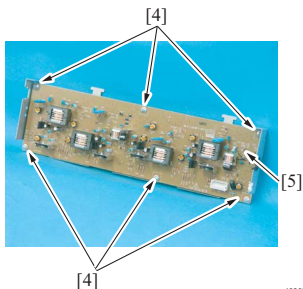
 94

2. Remove all the Connectors on the High Voltage Unit/2 [1].



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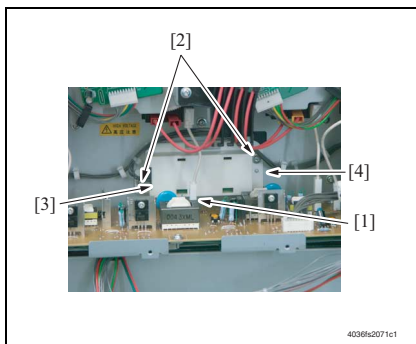
3. Remove two Screws [2], and remove the High Voltage Unit/2 Assy [3].



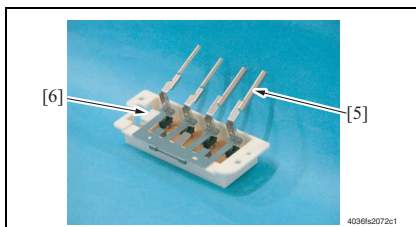
4036fs2070c1

4. Remove six Screws [4], and remove the High Voltage Unit/2 [5].

6.3.23 Tray 1 Paper Size Board (PWB-I1)

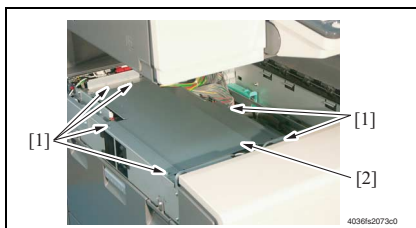


1. Slide out the Tray 1.
2. Remove the PWB Box.
3. Remove the Connector [1] on the High Voltage Unit/2.
4. Remove two Screws [2] and Connector [3], and remove the Tray 1 Paper Size Board Assy [4].

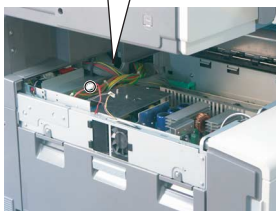
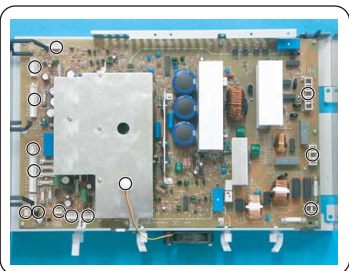


5. Remove the Lever [5].
6. Remove the Tray 1 Paper Size Board [6].

6.3.24 DC Power Supply (PU1)

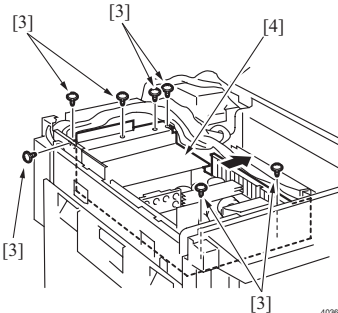


1. Remove the Exit Tray.
2. Remove six Screws [1], and remove the Board Cover [2].



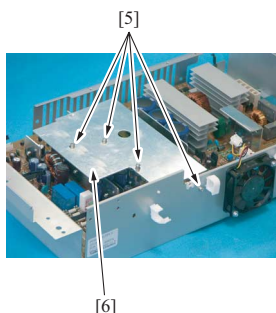
4036fs2074c1

3. Remove the Harness from thirteen wire saddles.
4. Unplug all connectors from the DC Power Supply.



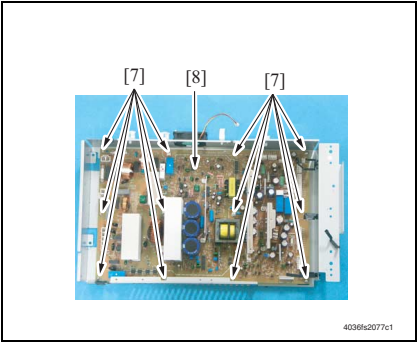
4036fs2075c1

5. Remove seven Screws [3], and remove the DC Power Supply Assy [4].



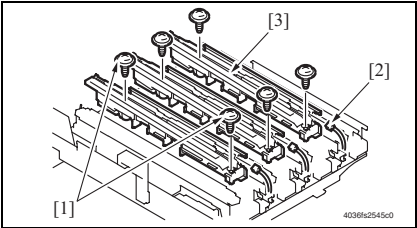
4036fs2076c1


6. Remove four Screws [5], and remove the Protective Cover [6].

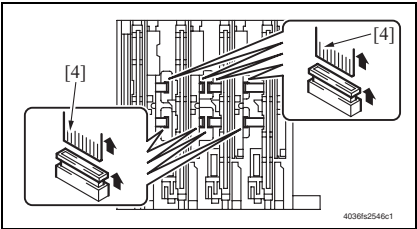


7. Remove 12 Screws [7], and remove the DC power Supply [8].

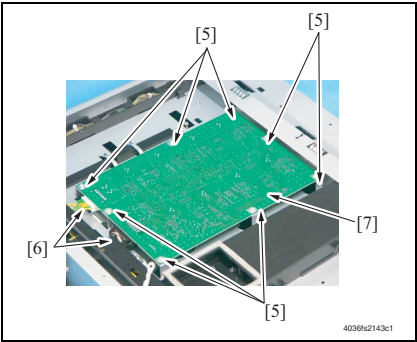
6.3.25 LED Drive Board (PWB-LED)



1. Remove the LPH Unit.
 80
2. Remove two screws [1], unplug the connector [2] each, and remove each guide Assy.

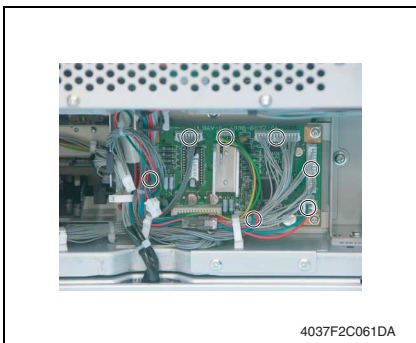


3. Remove the flat cables [4] (eight).



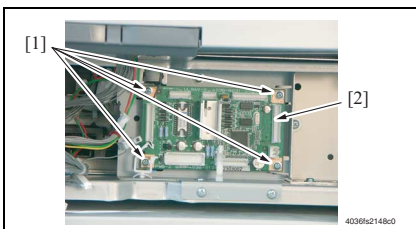
4. Remove eight screws [5], unplug two connectors [6], and remove the LED Drive Board [7].

6.3.26 Tray 2 Board (PWB-Z)



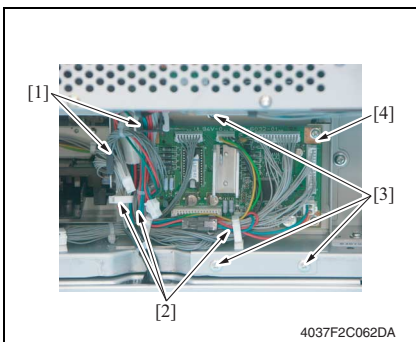
1. Remove the Tray 2 Rear Cover.
2. Remove all the Connectors on the Tray 2 Board.

 **53**



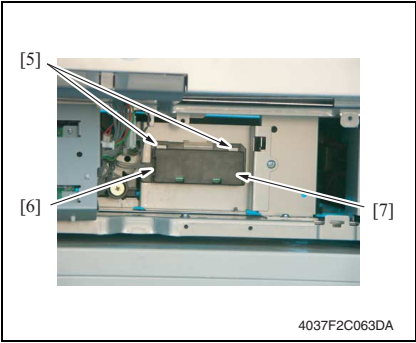
3. Remove four Screws [1], and remove the Tray 2 Board [2].

6.3.27 Tray 2 Paper Size Board (PWB-I2)

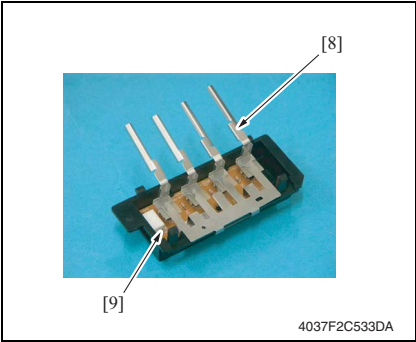


1. Slide out the Tray 2.
2. Remove the Tray 2 Rear Cover.
3. Remove the harness [2] from the wire saddle [1].
4. Remove three Screws [3], and remove the Tray 2 Board Fixing Bracket [4].

 **53**

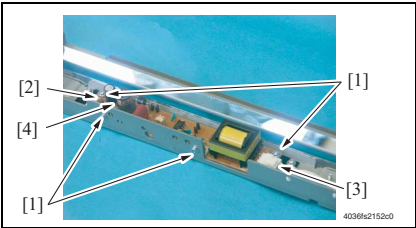


5. Remove two Claws [5] and Connector [6], and remove the Tray 2 Paper Size Board Assy [7].



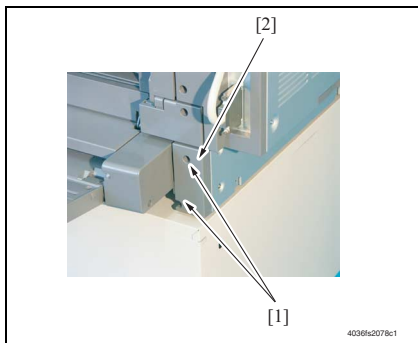
6. Remove the Lever [8], and remove the Tray 2 Paper Size Board [9].

6.3.28 Inverter Board (PU201)

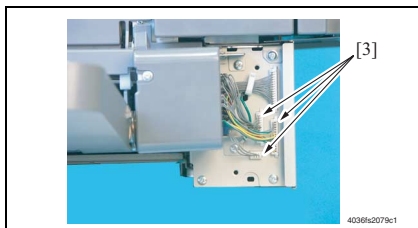


1. Remove the Scanner Assy.
2. Remove four Screws [1], Flat Cable [2] and Connector [3], and remove the Inverter Board [4].

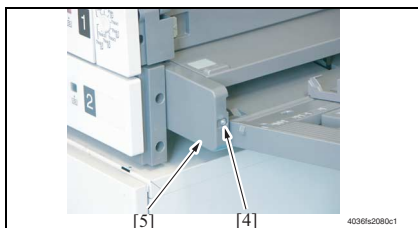
6.3.29 Multi Bypass Unit



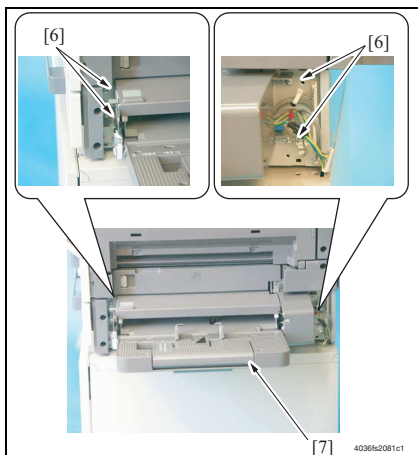
1. Remove two Screws [1], and remove the Tray 2 Rear Right Cover [2].



2. Remove three Connectors [3].



3. Remove the Screw [4], and remove the Bypass Left Cover [5].



4. Remove four Screws [6], and remove the Multi Bypass Unit [7].

NOTE

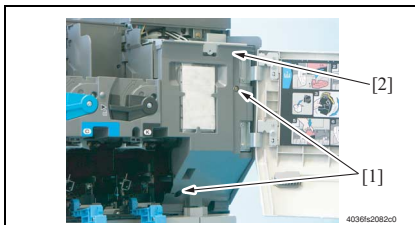
- The earth terminal will be screwed with one of four screws.

6.3.30 Toner Hopper Unit

1. Open the Front Door.
2. Remove the Toner Cartridge (C, M, Y, K).
3. Remove the IU (C, M, Y, K).

NOTE

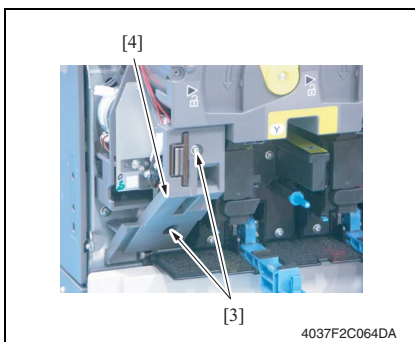
- After the Imaging Unit has been removed from the main unit wrap it in the light shielding cloth and store it in a dark place. DO NOT leave the Imaging Unit exposed to light for a extended period of time as it will become damaged.



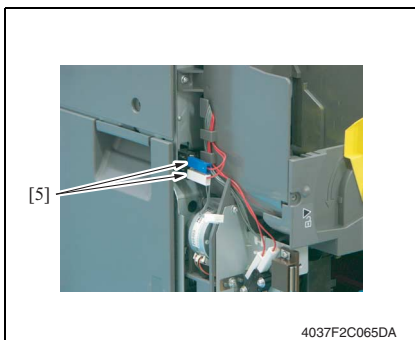
4. Remove the Left Front Cover and Panel Cover.

52

5. Remove two Screws [1], and remove the Front Right Cover [2].



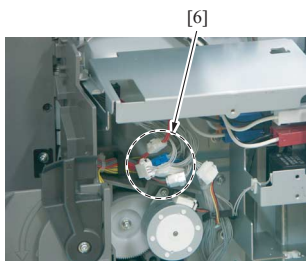
6. Remove two screws [3] and the Front Door Switch cover [4].



7. Remove two Terminals [5].

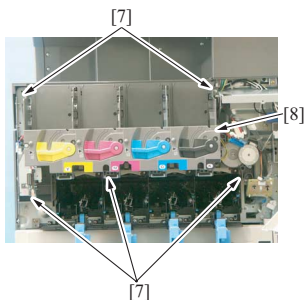
NOTE

- For installation of Hopper Unit, connect the Terminals in the sequence of blue and then white from upper.



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8. Disconnect five connectors [6].



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9. Remove five screws [7] and the Toner Hopper Unit [8].

6.3.31 LPH Unit

1. Open the Front Door.
2. Slide out the IU (C, M, Y, K).

NOTE

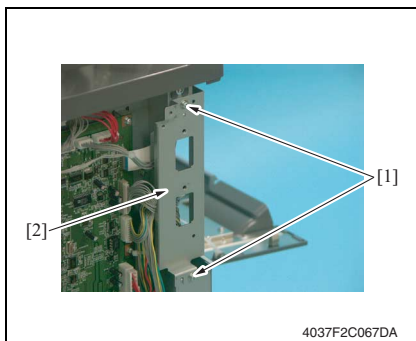
- After the IU has been pulled out, place the IU lock lever back into the locked position. When installing the Imaging Unit into the main unit, make sure that the Toner supply shutter is opened if the Imaging Unit Lower Cover is not used.

3. Remove the Image Transfer Belt Unit.

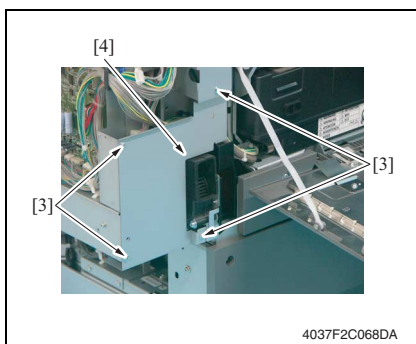
 29

4. Remove the Rear Right Cover, Rear Left Cover and Rear Cover.

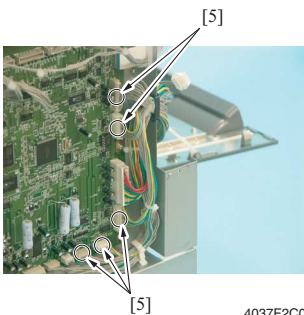
 51



5. Remove two screws [1] and the lattice connector fixing bracket [2].

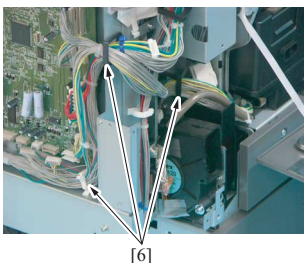


6. Open the Left Door.
7. Remove four Screws [3], and remove the Harness Protective Cover [4].



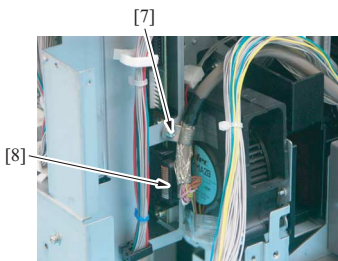
4037F2C069DB

8. Remove five Connectors [5] on the Control Board.



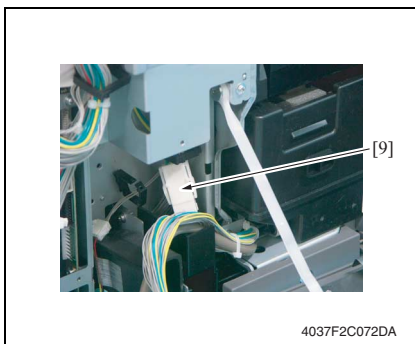
4037F2C070DA

9. Remove the harness from three wire saddles [6].

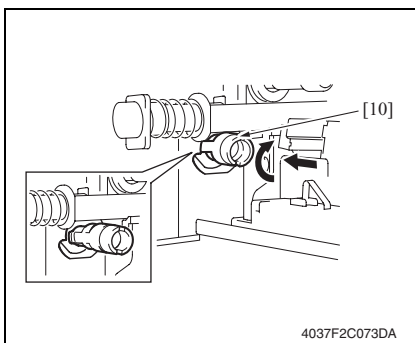


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10. Remove the Screw [7] and Connector [8].



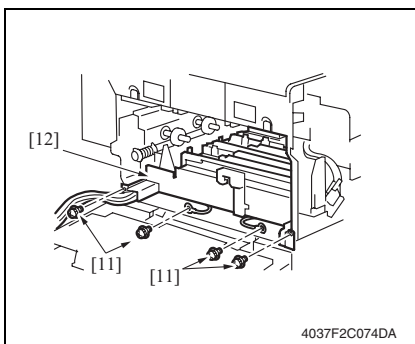
11. Remove the Connector [9].



12. Turning the IU (C, M, Y, K) drive hub [10], push it into the locked position (at four places).

NOTE

- During the locking procedure, use care not to touch the LED surface.
- Should the LED surface be touched, clean it with the LED Cleaning Jig.

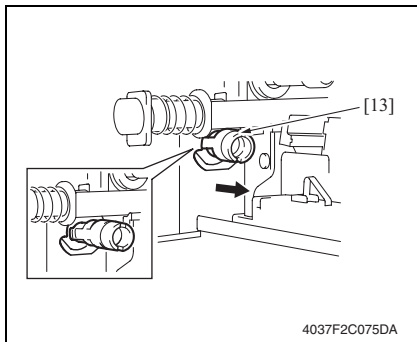


13. Remove four screws [11] and slide out the LPH Unit [12].

NOTE

- When the LPH Unit is to be replaced, remove the TCR Sensor from the old LPH Unit and remount it on the new one. This step is not, however, necessary if the IU is replaced at the same time.

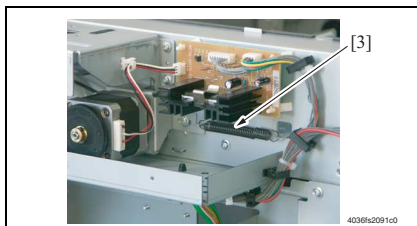
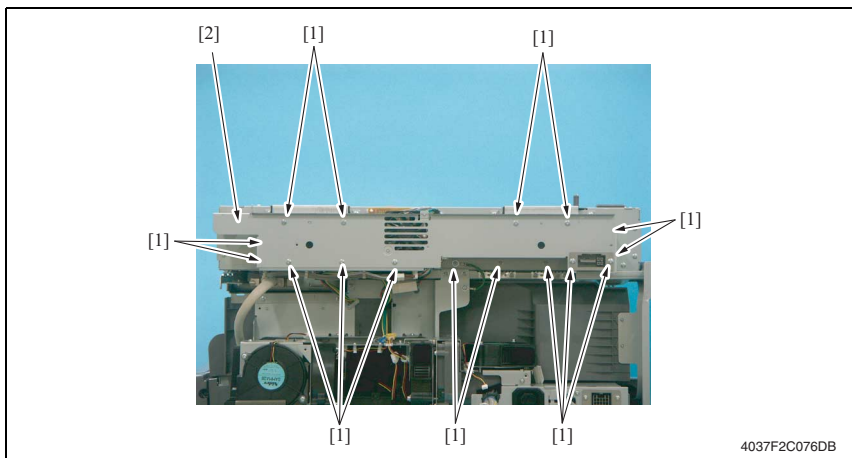
For replacement of TCR Sensor, see page 120.

**NOTE**

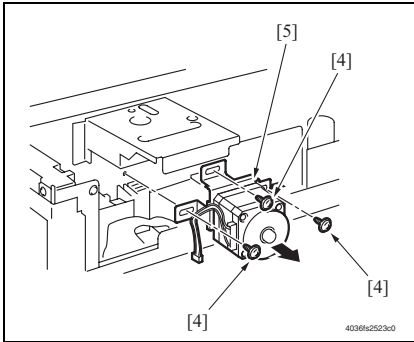
- After replacing the LPH Unit, be sure to turn four Drive Hubs [13] to release locking. Proceeding with job while still being locked may unintentionally release the locking condition, thus damaging the Drive hub.
- For installation of the LPH Unit, lock four Drive hubs again before installation.
- When the LPH Unit has been reinstalled, be sure to run “Stabilizer” available from “Image Adjust” of the Service Mode.

6.3.32 Scanner Motor (M201)**A. Removal Procedure**

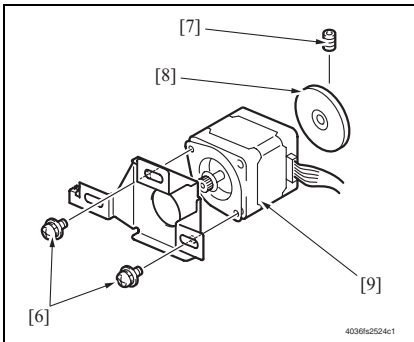
1. Remove the ADF.
 2. Remove the Rear Cover and IR Upper Rear Cover.
- ES 53**
3. Remove 16 screws [1].
 4. Remove the Connector and the reinforcement frame [2].



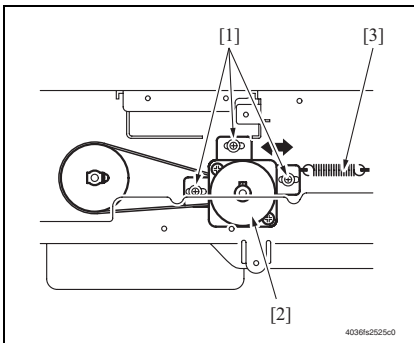
5. Remove the tension spring [3] for the Scanner Motor belt.



6. Remove three screws [4] and the Scanner Motor Assy [5].



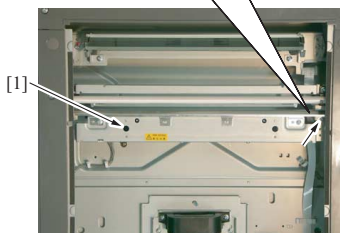
7. Remove two screws [6], set screw [7], damper [8] and the Scanner Motor [9].



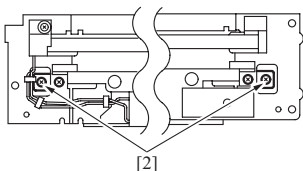
B. Reinstallation Procedure

1. Temporarily secure the Scanner Motor Assy [2] using three screws [1].
2. Hook the spring [3].
3. With the Scanner drive gear set screw located on the right-hand side as shown on the left, slide the Scanner Motor Assy to the left and check that it is returned to the original position by the tension of the spring. Perform this step three times.
4. Securely tighten the three screws to fix the Scanner Motor Assy [2] into position.

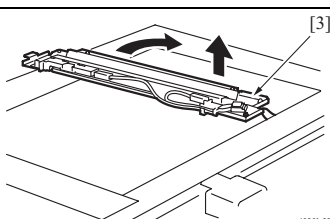
6.3.33 Scanner Assy



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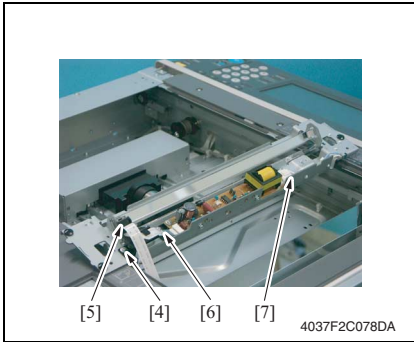
4036fs2527c0

1. Remove the Original Glass.
2. Move the Scanner Assy [1] to the location shown and remove one mounting screw each at the front and rear end.

NOTE

- Do not remove the Scanner Positioning Screws (red-painted) [2].

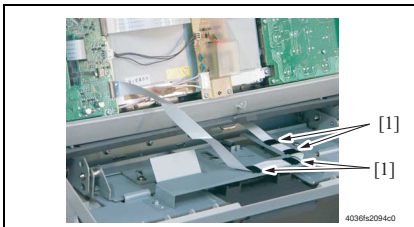
3. Take out the Scanner Assy [3] by turning it in the direction of the arrow shown.



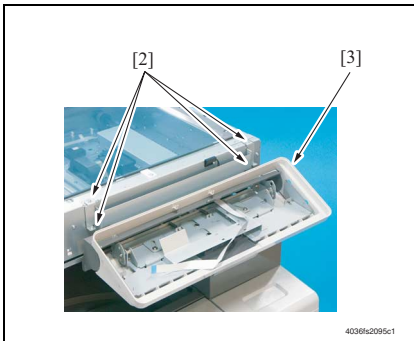
4. Remove the screw [4] and the holder [5].
5. Remove the flat cable [6].
6. Remove the Scanner Assy [7].

6.3.34 Scanner Drive Cables

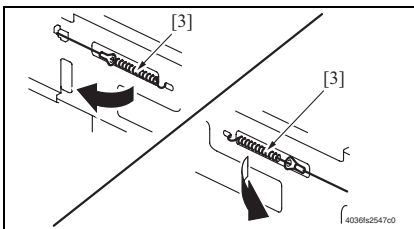
A. Removal Procedure



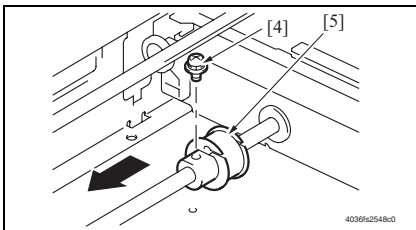
1. Remove the Rear Cover.
53
2. Remove the Control Panel.
56
3. Remove four Presser Bars [1] of Flat Cable.



4. Remove the IR Front Cover.
55
5. Remove four screws [2] and the control panel base [3].



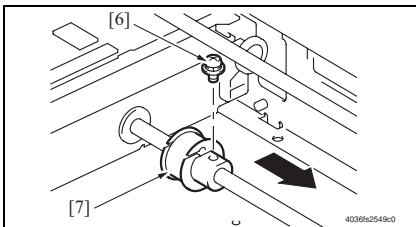
6. Remove the Original Glass.
55
7. Remove the Scanner Assy.
85
8. Unhook the springs [3] of the Scanner Drive Cables on the hook side, one each at the front and in the rear.



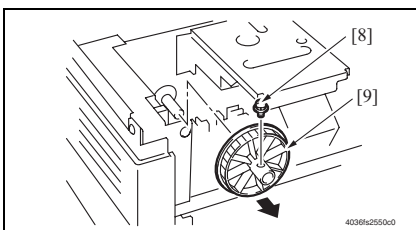
9. Remove the Scanner Motor Assy.

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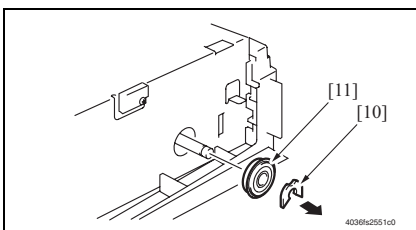
10. Remove the screw [4] and then slide the front pulley [5] toward the front.



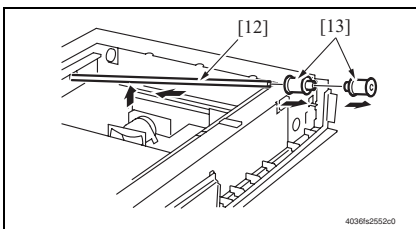
11. Remove the Screw [6], and slide the Wire Pulley [7] (Rear side) in the direction of front side.



12. Remove the screw [8] and the Scanner drive gear [9].



13. Snap off the C-clip [10] and remove the bushing [11] (front).

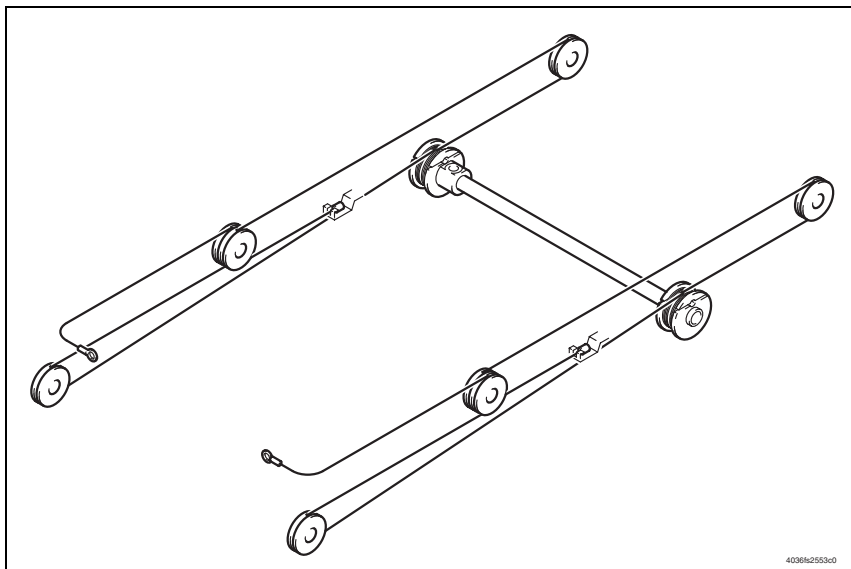


14. Slide the shaft [12] toward the rear and lift it. Then, remove the front and rear pulleys [13].

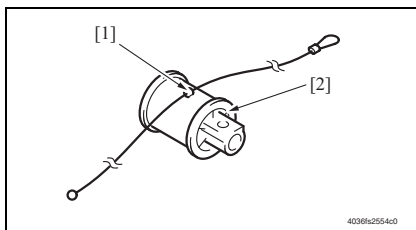
15. Remove the Scanner Drive Cables.

6.3.35 Winding of the Scanner Drive Cables

<Overall figure>



A. Reinstallation Procedure

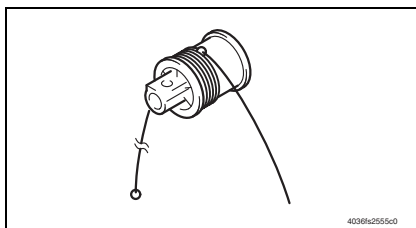


<Front>

1. Position the round bead [1] of the Scanner Drive Cable in the pulley [2] as shown.

NOTE

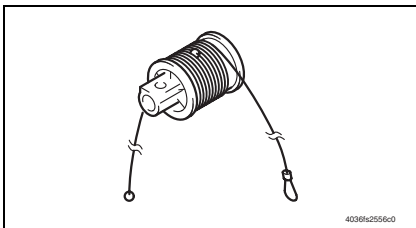
- Make sure that the bead snugly rests in the slit in the pulley.



2. Wind the fixed bead end of the cable around the pulley five turns clockwise, from the rear toward the front side.

NOTE

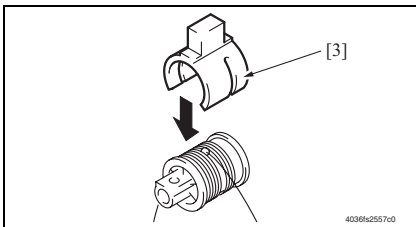
- Make sure that no part of the cable rides on the other.



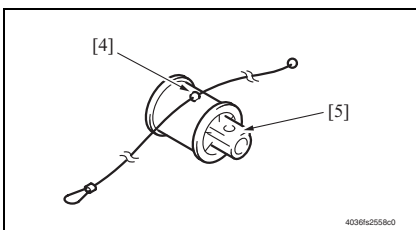
3. Wind the hook end of the cable around the pulley five turns counter-clockwise, from the front toward the rear side.

NOTE

- **Make sure that no part of the cable rides on the other.**



4. Slip the Cable Holding Jig [3] onto the pulley to secure the cable in position.

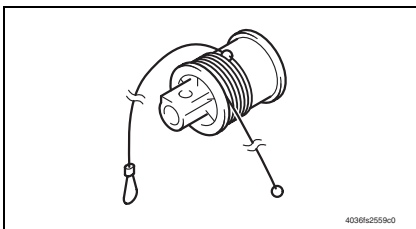


<Rear>

5. Position the round bead [4] of the Scanner Drive Cable in the pulley [5] as shown.

NOTE

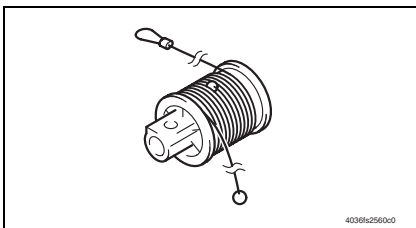
- **Make sure that the bead snugly rests in the slit in the pulley.**



6. Wind the fixed bead end of the cable around the pulley five turns clockwise, from the front toward the rear side.

NOTE

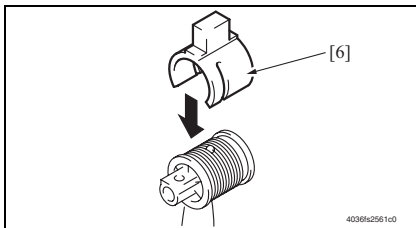
- **Make sure that no part of the cable rides on the other.**



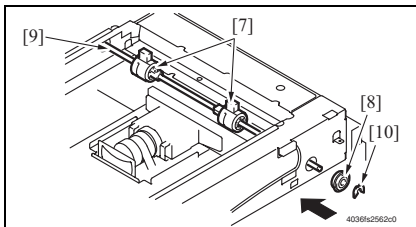
7. Wind the hook end of the cable around the pulley five turns counter-clockwise, from the rear toward the front side.

NOTE

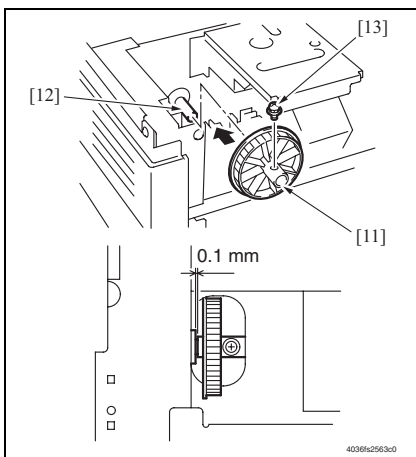
- **Make sure that no part of the cable rides on the other.**



8. Slip the Cable Holding Jig [6] onto the pulley to secure the cable in position.



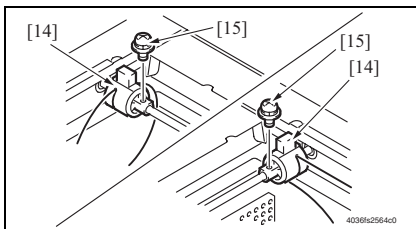
9. Install the front and rear pulleys [7] and bushings [8] onto the shaft [9] and fit the C-clip [10].



10. Mount the Scanner drive gear [11] on the shaft [12] and secure it using the screw [13].

NOTE

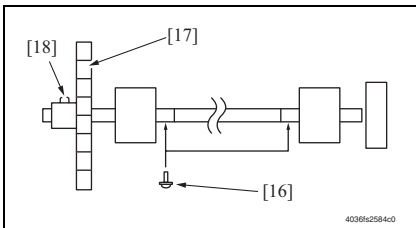
- Allow a clearance of about 0.1 mm between the Scanner drive gear and bushing.



11. Secure the front and rear pulleys [14] using the screw [15] each.

NOTE

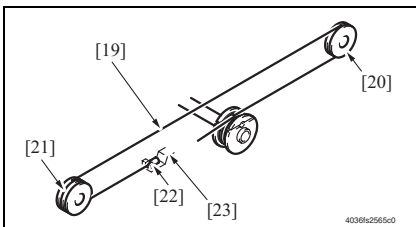
- Apply the Screw lock on the Screw.

**NOTE**

- Mount the Screw [16] in the direction that is opposite against the direction for which Scanner Drive Gear [17] and Screw [18] are screwed together as shown in the left figure.

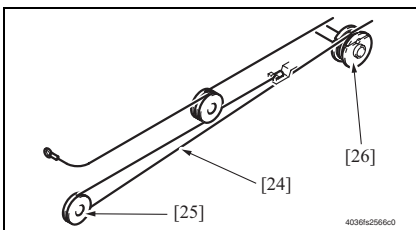
12. Mount the Scanner Motor Assy.

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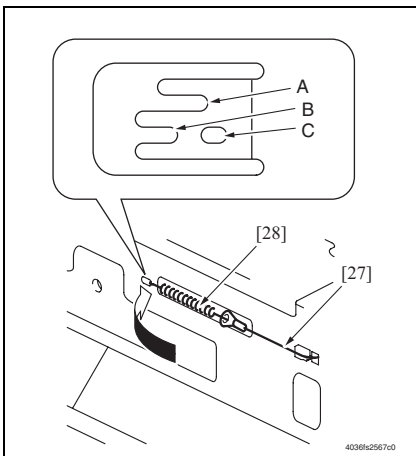


<Front>

13. Wind the bead end of the cable [19] around pulley C [20] and pulley B [21], then hook the bead [22] onto the Adjustable Anchor [23].



14. Wind the hook end of the cable [24] around pulley A [25] and pulley B [26].

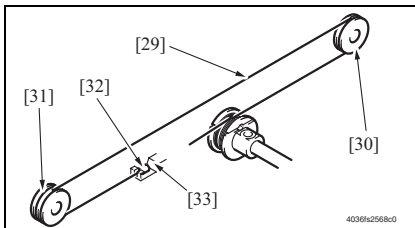


15. Fit the hook end of the cable [27] to the spring [28] and then hook the spring to the catch A in the frame.

16. Measure the Spring length, and check if its length is within the range of 63.0 mm \pm 1 mm.

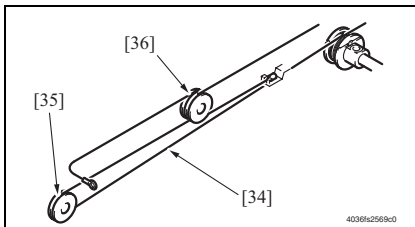
<When out of the given range>

- In case of 64.1 mm or more:
Retry to put the spring on the catch B.
- In case of 61.9 mm or less:
Retry to put the spring on the catch C.

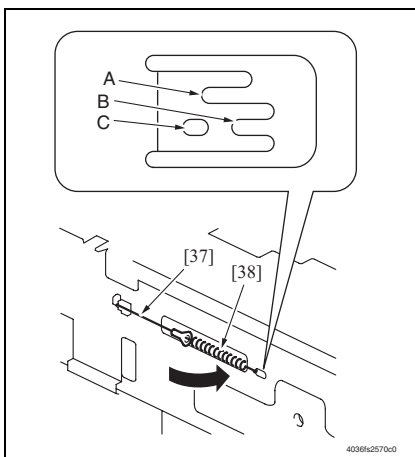


<Rear>

17. Wind the bead end of the cable [29] around pulley F [30] and pulley E [31], then hook the bead [32] onto the Adjustable Anchor [33].



18. Wind the hook end of the cable [34] around pulley D [35] and pulley E [36].



19. Fit the hook end of the cable [37] to the spring [38] and then hook the spring to the catch A in the frame.
20. Measure the Spring length, and check if its length is within the range of 63.0 mm \pm 1 mm.

<When out of the given range>

- In case of 64.1 mm or more:
Retry to put the spring on the catch B.
- In case of 61.9 mm or less:
Retry to put the spring on the catch C.

21. Remove the Cable Holding Jigs from the front and rear pulleys.
22. Adjust the focus positioning of the Scanner and Mirrors Unit.
23. Adjust the position of the Scanner and 2nd/3rd Mirrors Carriage.

NOTE

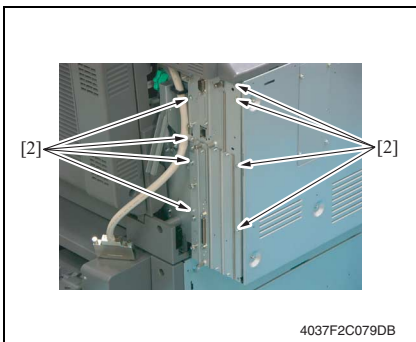
- Whenever the Scanner Drive Cables have been removed, be sure to carry out the "Feed Direction Adjustment" procedure.

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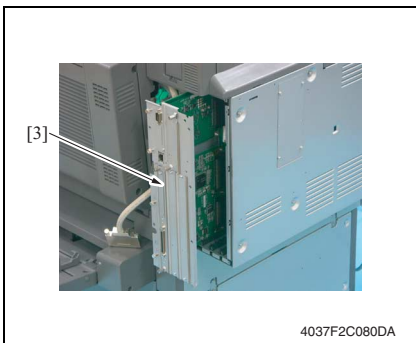
6.3.36 PWB Unit



1. Remove the Right Rear Cover.
2. Disconnect the connector [1].

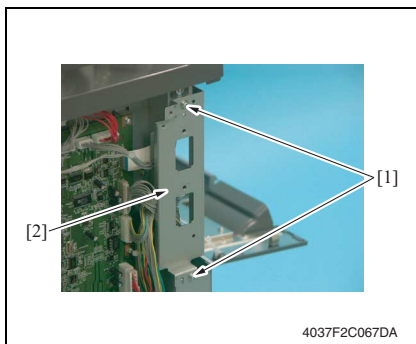


3. Remove eight screws [2].

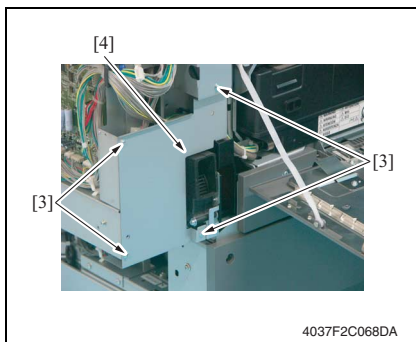


4. Remove the PWB Unit [3].

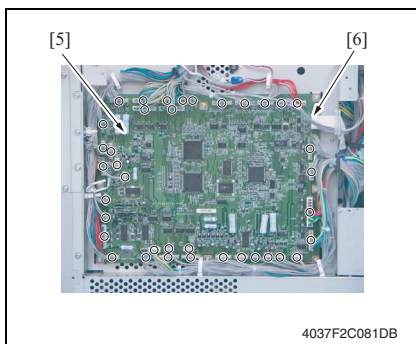
6.3.37 PWB Box



1. Remove the Ozone filter.
- 26 2. Remove the Rear Cover, Lower Rear Cover, Right Rear Cover, Left Rear Cover, and IR Left Cover.
- 51 3. Remove two screws [1] and the lattice connector fixing bracket [2].



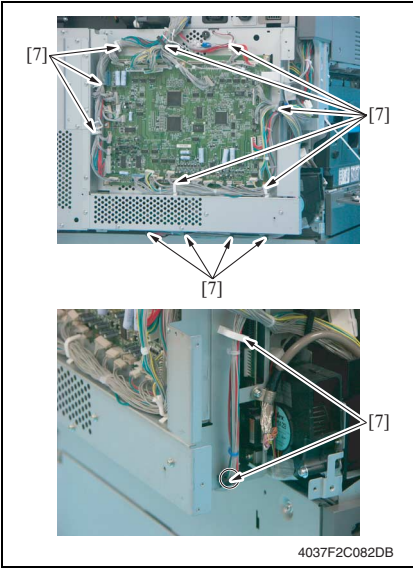
4. Open the Left door.
5. Remove four screws [3] and the Harness Protective Cover [4].



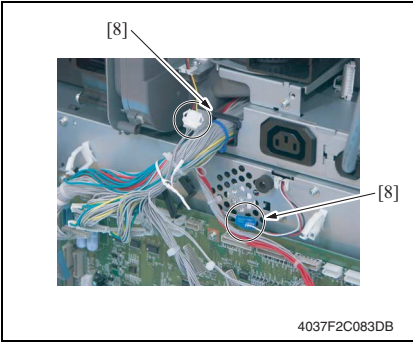
6. Remove all the connectors on the Mechanical Control Board [5].

NOTE

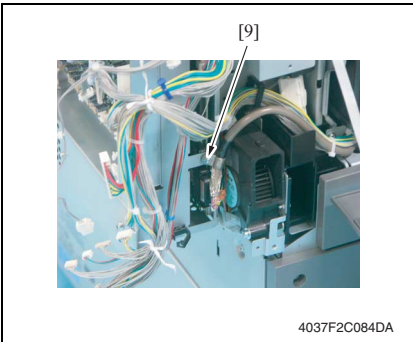
- Do not remove the Flat cable [6].



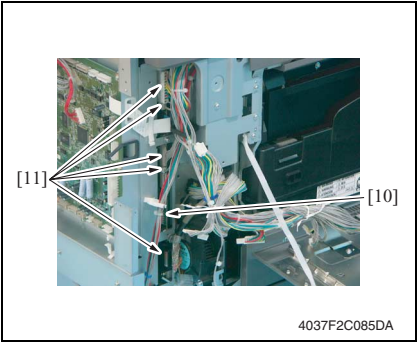
7. Remove the Harness from fourteen wire saddles [7].



8. Remove two connectors [8].



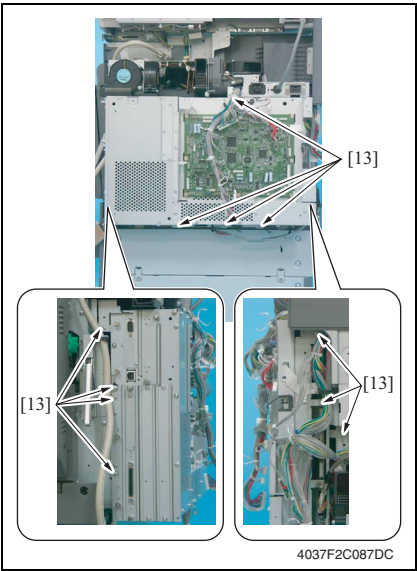
9. Remove the connector set screw [9].



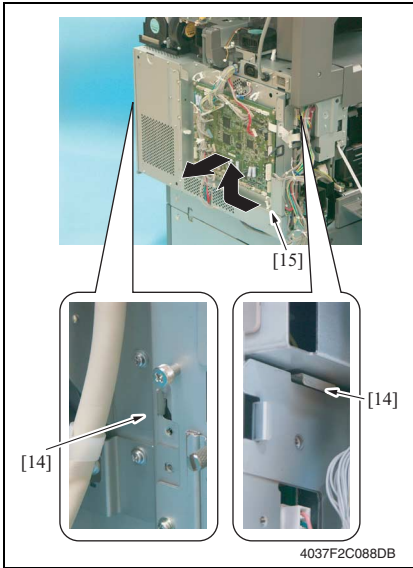
10. Remove six connectors [11] connected to the Slide Interface Board [10].



11. Remove the connector [12].

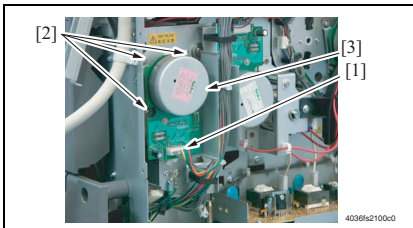


12. Remove eleven screws [13].



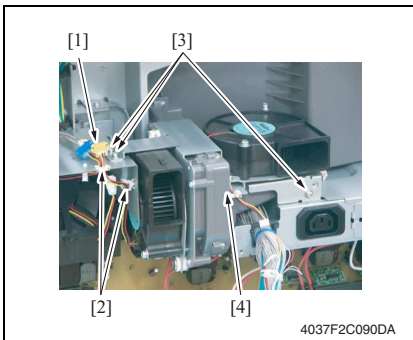
13. Remove two claws [14] and the Board Box [15].

6.3.38 Main Motor (M1)

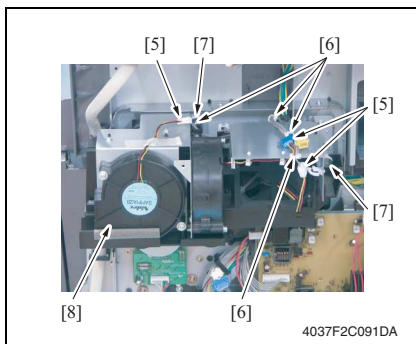


1. Remove the PWB Box.
2. Remove the Connector [1] and three Screws [2], and remove the Main Motor [3].

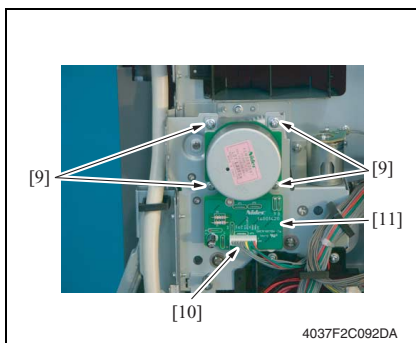
6.3.39 Fusing Drive Motor (M2)



1. Remove the PWB Box.
2. Remove two connectors [1], and remove the Harness from two wire saddles [2].
3. Remove three screws [3] and the Fan Motor Assy/1 [4].

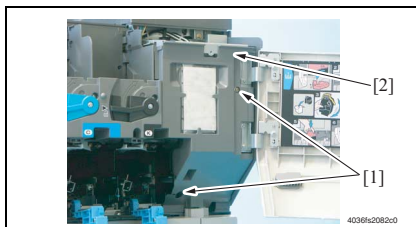


4. Remove two connectors [5], and remove the Harness from three wire saddles [6].
5. Remove two shoulder screws [7] and the Fan Motor Assy [8].

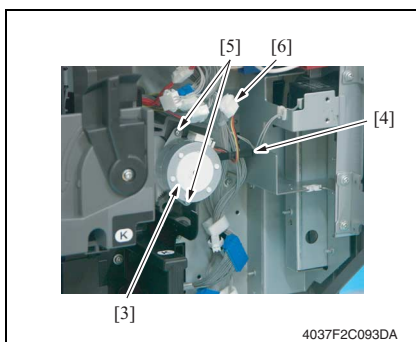


6. Remove four Screws [9] and Connector [10], and remove the Fusing Drive Motor [11].

6.3.40 Toner Supply Motor C/K (M3)

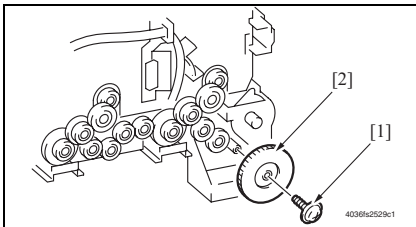



1. Remove the Panel Cover.
- 53 Remove two Screws [1], and remove the Front Right Cover [2].

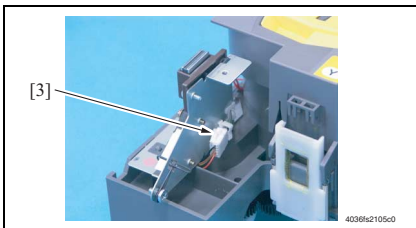


3. Remove the Harness for the Toner Supply Motor C/K [3] from the wire saddle [4].
4. Remove two Screws [5] and Connector [6], and remove the Toner Supply Motor C/K [3].

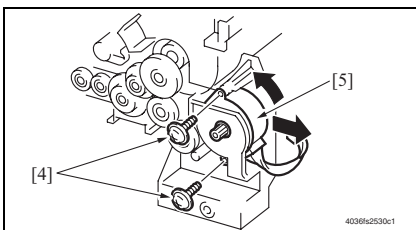
6.3.41 Toner Supply Motor Y/M (M4)



1. Remove the Toner Hopper.
 **78**
2. Remove the screw [1] and the gear [2].

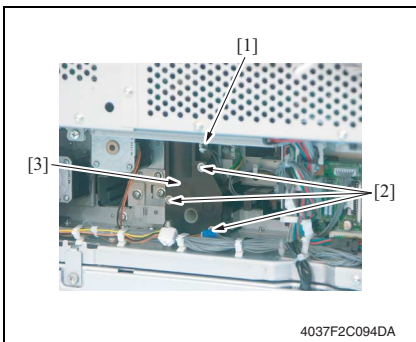



3. Remove the Connector [3].

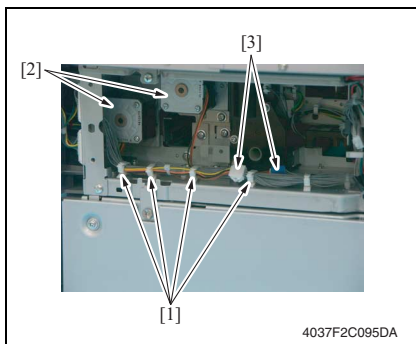


4. Remove two screws [4]. Then, turn the Toner Replenishing Motor Y/M [5] counterclockwise and take it off the machine.

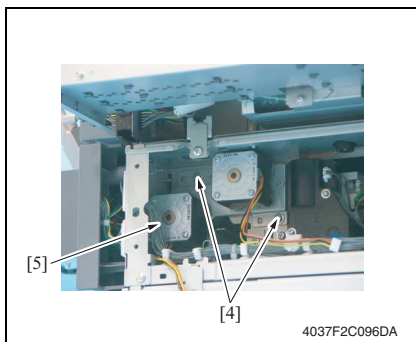
6.3.42 Tray 2 Lift-Up Motor (M101)



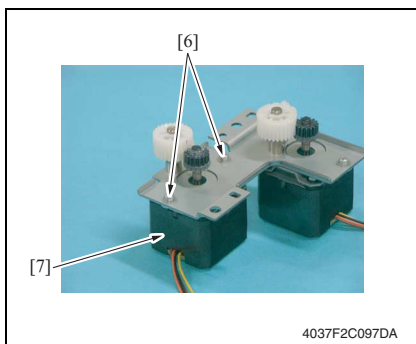
1. Pull out the Tray 2.
2. Remove the Tray 2 Rear Cover.
 **53**
3. Remove the connector [1].
4. Remove three screws [2] and the Tray 2 Lift-Up Motor [3].

6.3.43 Tray 2 Paper Feed Motor (M102)

1. Pull out the Tray 2.
2. Remove the Tray 2 Rear Cover.
3. Remove the Harness for the Motor Assy [2] from four wire saddles [1].
4. Remove two connectors [3].

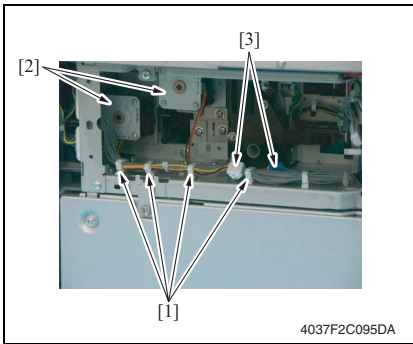


5. Remove two screws [4] and the Motor Assy [5].

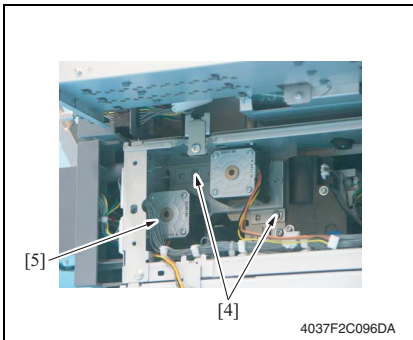


6. Remove two screws [6], and remove Tray 2 Paper Feed Motor [7].

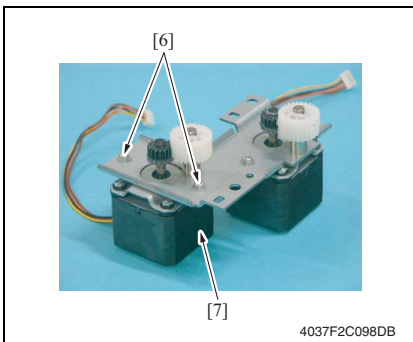
6.3.44 Tray 2 Vertical Transport Motor (M103)



1. Pull out the Tray 2.
2. Remove the Tray 2 Rear Cover.
3. Remove the Harness Assy [2] from four wire saddles [1].
4. Remove two connectors [3].

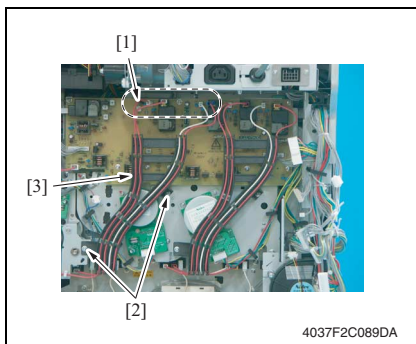


5. Remove two screws [4] and the Motor Assy [5].

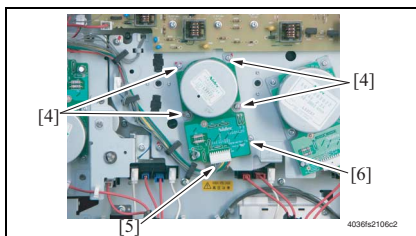


6. Remove two screws [6] and the Tray 2 Vertical Transport Motor [7].

6.3.45 Color PC Drum Motor (M5)



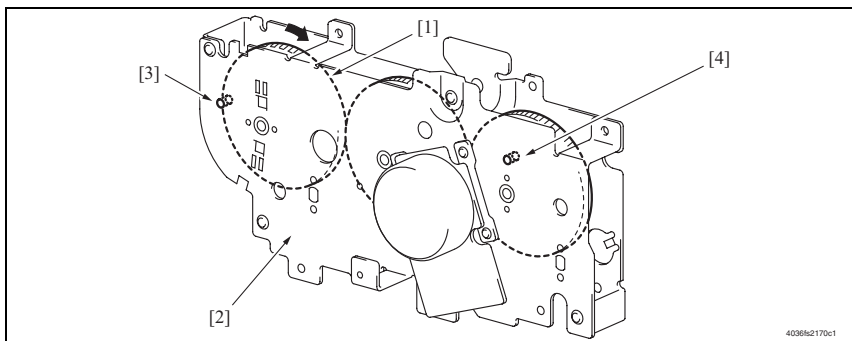
1. Remove the PWB Box.
2. Remove four Connectors [1] on the High Voltage Unit/1.
3. Remove two Screws [2], and remove the Harness Holder [3].



4. Remove four Screws (Red-painted) [4] and Connector [5], and remove the Color PC Drum Motor [6].

Cautions when mounting the Color PC Drum Motor:

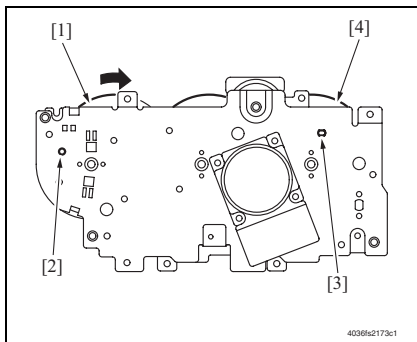
- Before mounting the Color PC Drum Motor, be sure to check the assembled position of PC Gear. If its position is improper, make positioning adjustment.

A. Checking method

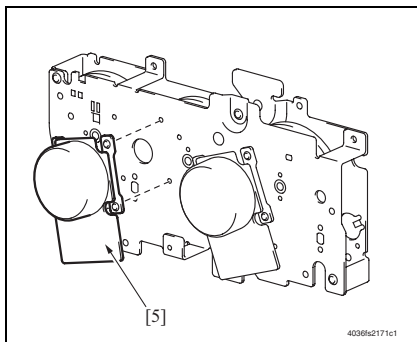
1. Slowly turn the PC Gear/1 [1], and fit the hole A [3] and B [4] with the Gear holes as shown on the above figure.
2. Visually check if the hole A [3] and B [4] are fit with each Gear hole at the same time.

B. Adjusting method

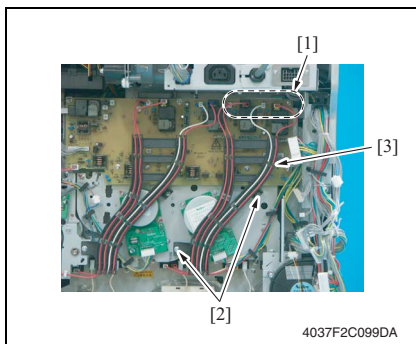
1. Remove seven Screws and Upper Frame Assy.
2. Turn the PC Gear/1 [1], and fit the hole A [2] with the PC Gear/1 [1] hole while visually checking.
3. Fix the PC Gear/1 [1], and then fit the hole B [3] with the PC Gear/2 [4] hole while visually checking.



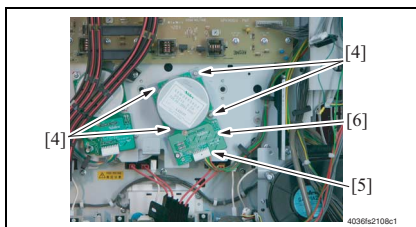
4. Mount the Color PC Drum Motor [5] while two hole positions are well set.
5. Reinstall the Upper Frame Assy.



6.3.46 Color Developing Motor (M6)



1. Remove the PWB Box.
94
2. Remove eight Connectors [1] on the High Voltage Unit/1.
3. Remove two Screws [2], and remove the Harness Holder [3].

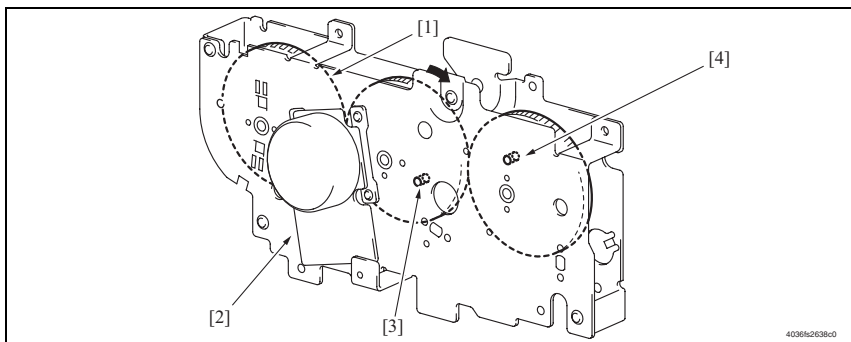


4. Remove four Screws [4] and Connector [5], and remove the Color Developing Motor [6].

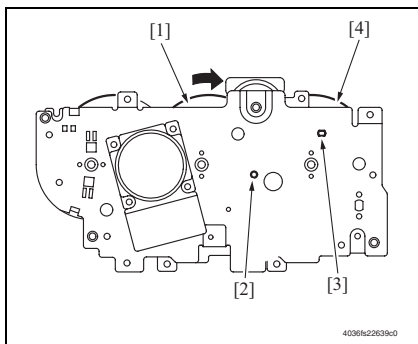
Cautions when mounting the Color Developing Motor:

- Before mounting the Color Developing Motor, be sure to check the assembled position of PC Gear. If its position is improper, make positioning adjustment.

A. Checking method

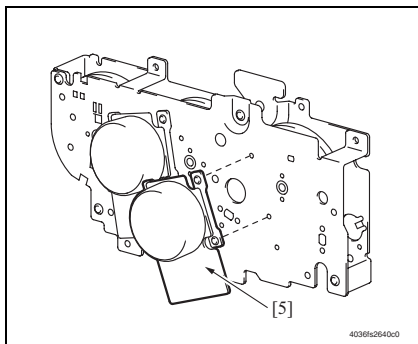


1. Slowly turn the PC Gear/1 [1], and fit the hole A [3] and B [4] with the Gear holes as shown on the above figure.
2. Visually check if the hole A [3] and B [4] are fit with each Gear hole at the same time.

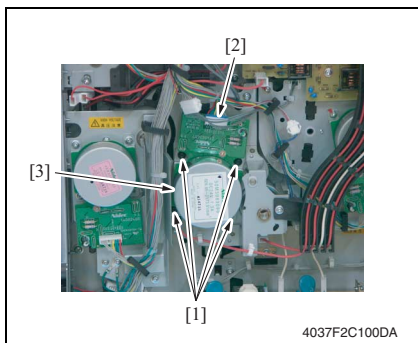


B. Adjusting method

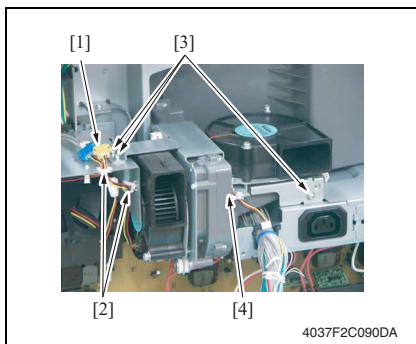
1. Remove seven Screws and the Upper Frame Assy.
2. Turn the PC Gear/3 [1], and fit the hole C [2] with the PC Gear/3 [1] hole while visually checking.
3. Fix the PC Gear/3 [1], and then fit the hole B [3] with the PC Gear/2 [4] hole while visually checking.
4. Mount the Color Developing Motor [5] while two hole positions are well set.
5. Reinstall the Upper Frame Assy.




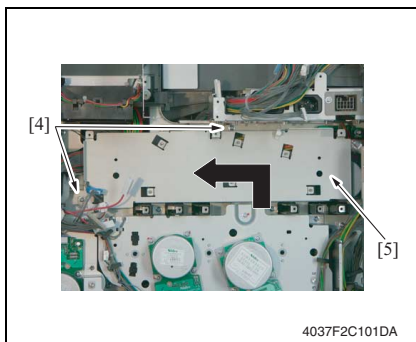
6.3.47 K PC Motor (M7)




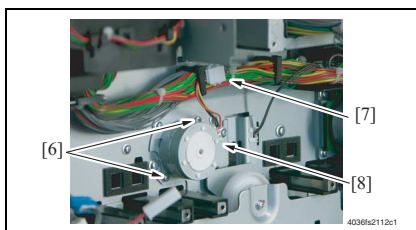
1. Remove the PWB Box.
2. Remove four Screws [1] and Connector [2], and remove the K PC Motor [3].

6.3.48 1st Image Transfer Pressure/Retraction Motor (M11)

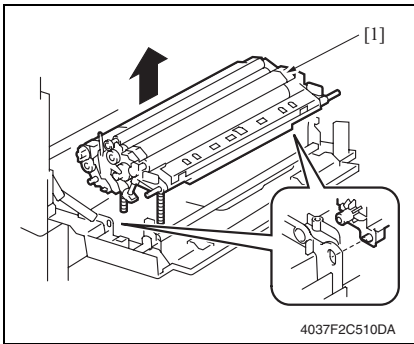
1. Remove the PWB Box.
 **94**
2. Remove two connectors [1], and remove the Harness from two wire saddles [2].
3. Remove three screws [3] and the Fan Motor Assy/1 [4].



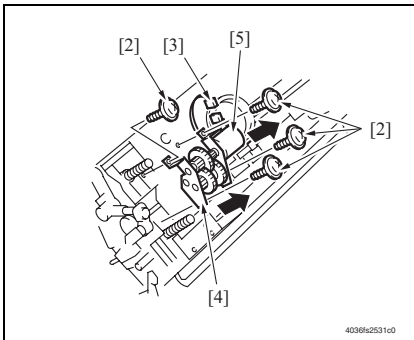
4. Remove the High Voltage Unit/1.
 **70**
5. Remove two Screws [4], and remove the High Voltage Unit/1 Fixing plate [5].



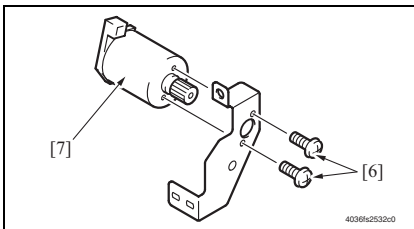
6. Remove two Screws [6] and Connector [7], and remove the 1st Image Transfer Pressure/Retraction Motor [8].

6.3.49 2nd Image Transfer Pressure/Retraction Motor (M13)

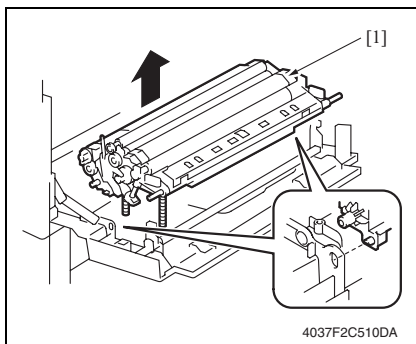
1. Open the Right Door.
2. Unlock the tab and remove the Transport Unit Assy [1].



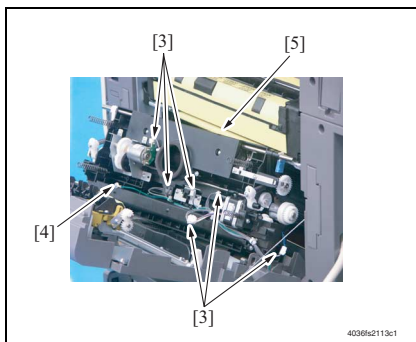
3. Remove four screws [2], unplug the connector [3], and remove the gear Assy [4] and motor Assy [5].



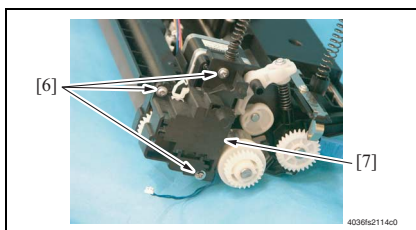
4. Remove two screws [6] and the 2nd Image Transfer Pressure/Retraction Motor [7].

6.3.50 Intermediate Transport Motor (M14)

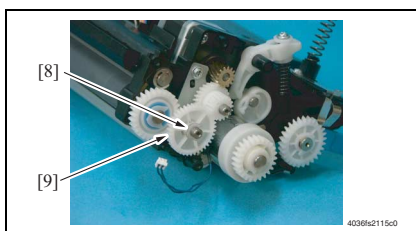
1. Open the Right Door.
2. Remove the Lock claw to make free conditions of Transport section Assy [1].



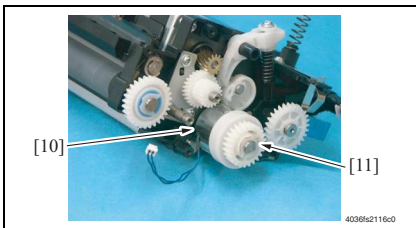
3. Remove six Connectors [3] and Earth [4], and remove the Transport section Assy [5].



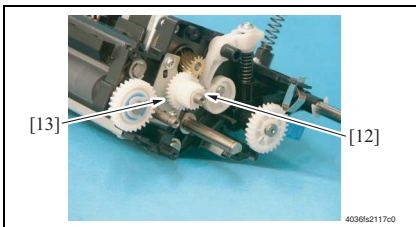
4. Remove three Screws [6], and remove the Holder [7].



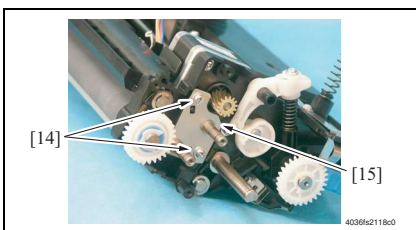
5. Remove the C-ring [8], and remove the Gear 1 [9].



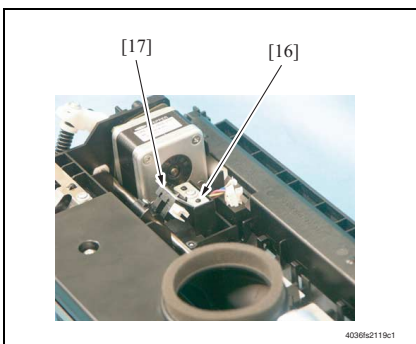
6. Remove the C-ring [10], and remove the Gear 2 [11].



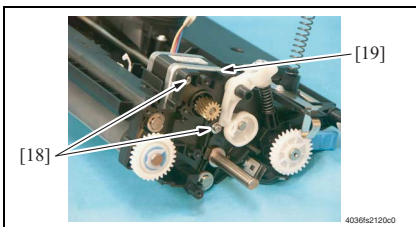
7. Remove the C-ring [12], and remove the Gear 3 [13].



8. Remove two Screws [14], and remove the Mounting plate [15].



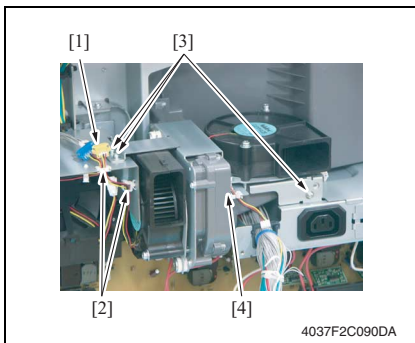
9. Remove the Screw [16], and remove the Sensor Assy [17].



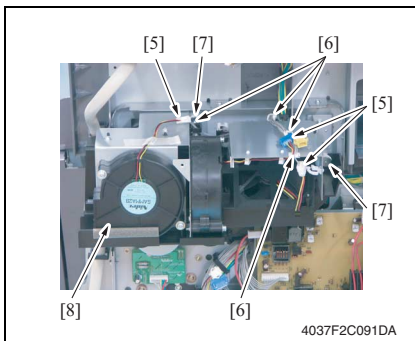
10. Remove two Screws [18], and remove the Intermediate Transport Motor [19].

NOTE

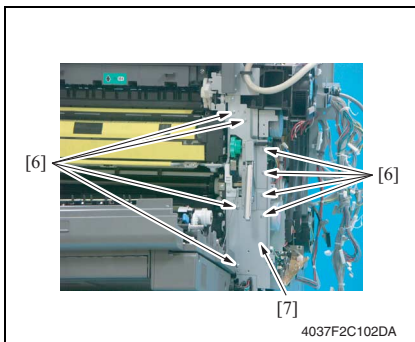
- Remove the Intermediate Transport Motor while its Harness is well fit with the groove.
- Use care on the harness not to be bitten.

6.3.51 Fusing Pressure Roller Pressure/Retraction Motor (M19)

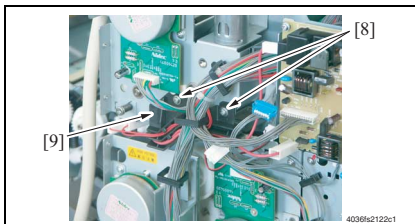
1. Remove the PWB Box.
94
2. Remove two connectors [1], and remove the Harness from two wire saddles [2].
3. Remove three screws [3] and the Fan Motor Assy/1 [4].



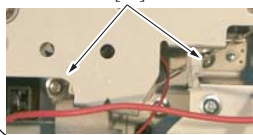
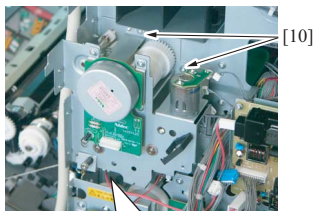
4. Remove two connectors [5], and remove the Harness from three wire saddles [6].
5. Remove two shoulder screws [7] and the Fan Motor Assy/2 [8].



6. Open the Right Door.
7. Remove the Fusing Unit.
35
8. Remove the Wiring Cover.
See the procedure 2 of page 20 "Replacing of Tray 2 Paper Take-up Roller".
9. Remove eight Screws [6], and remove the Rear Handle Assy [7].

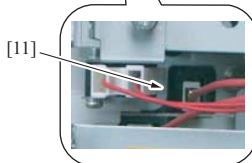
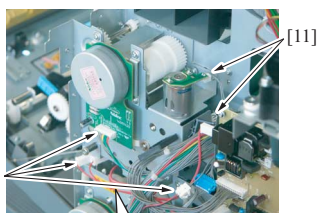


10. Remove two Screws [8], and remove the Harness Guide [9].



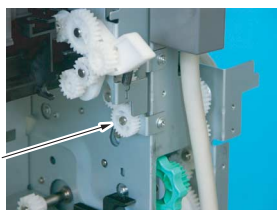
4036fs2124c1

11. Remove four Screws [10].



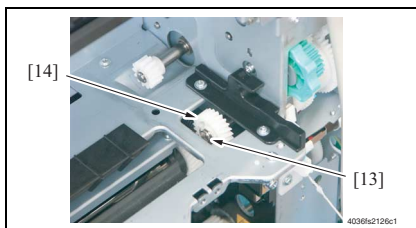
4036fs2123c1

12. Remove six Connectors [11].



4036fs2125c1

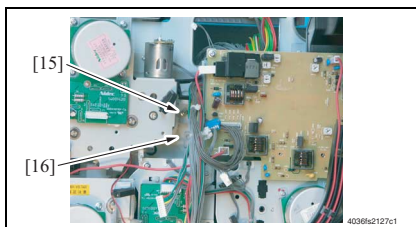
13. Remove the Gear [12].



14. Remove the E-ring [13], and remove the Gear [14].

NOTE

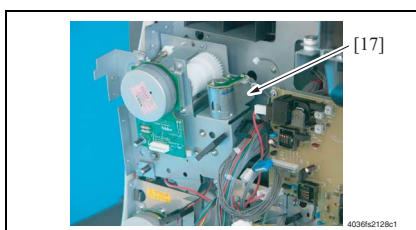
- Use care not to miss the Shaft.



15. Remove the Screw [15], and remove the Wire Rail [16].

NOTE

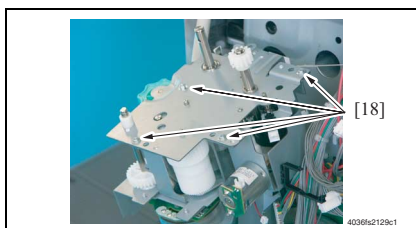
- Close the Right Door when removing to prevent the wire from damaging.



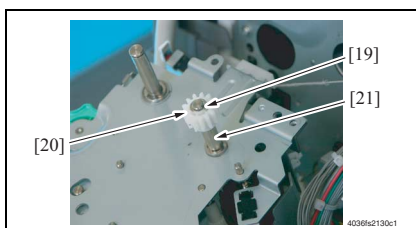
16. Remove the Fusing Drive Gear Assy [17].

NOTE

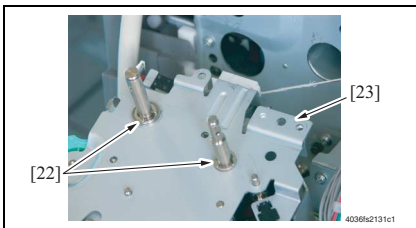
- Use care not to hurt the Right Door wire and Harness around.



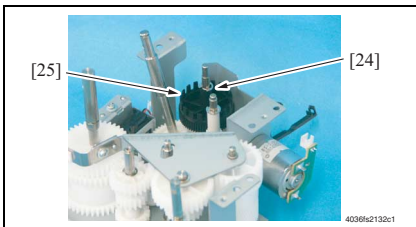
17. Remove four Screws [18].



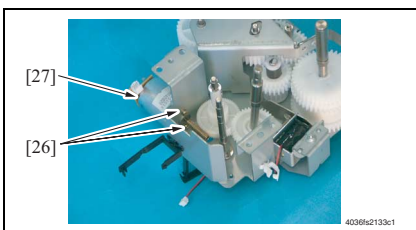
18. Remove the E-ring [19] and Shaft [20], and remove the Gear [21].



19. Remove two E-rings [22], and remove the Cover [23].

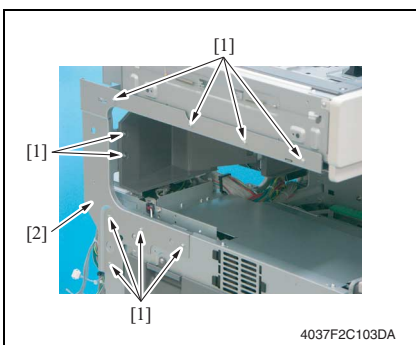



20. Remove the E-ring [24], and remove the Gear [25].

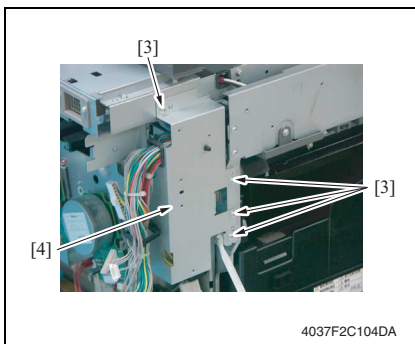


21. Remove the two Screws [26], and remove the Fusing Pressure Roller Pressure/Retraction Motor [27].

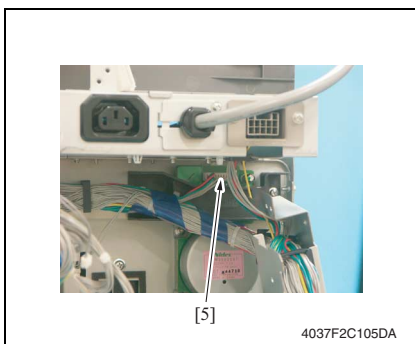
6.3.52 Cleaning Brush Motor (M22)



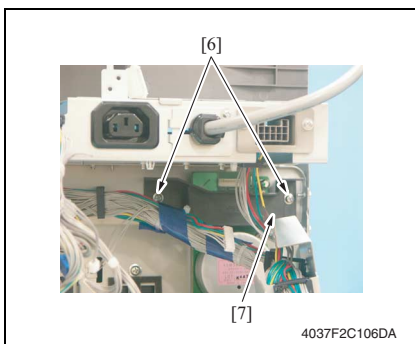
1. Remove the High Voltage Unit/1 mounting plate.
 See the procedures 1 to 4 of page 106 "1st Image Transfer Pressure/ Retraction Motor".
2. Remove ten screws [1], and remove the IR Left Frame [2].



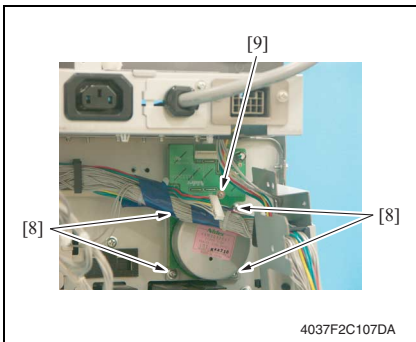
3. Remove four screws [3] and the wiring guide plate [4].



4. Remove the connector [5].

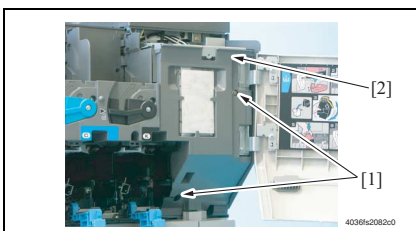


5. Remove two Screws [6], and remove the Harness Holder [7].

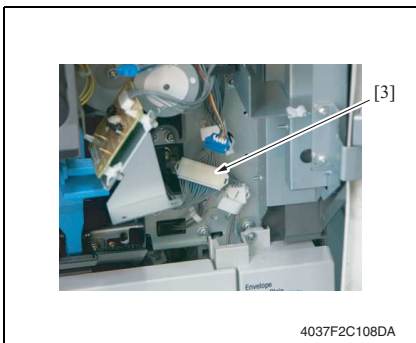


6. Remove four Screws [8], and remove the Cleaning Brush Motor [9].

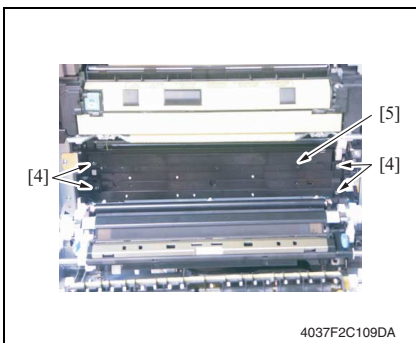
6.3.53 IDC/Registration Sensor/1,2 (PC8/PC9)



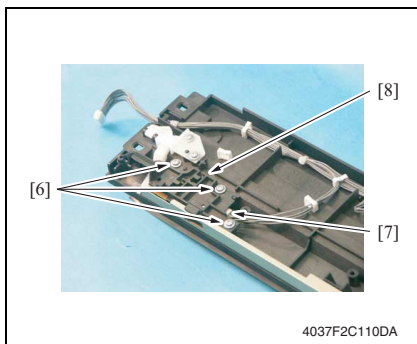
1. Open the Front Door.
2. Remove the Panel Cover.
3. Remove two Screws [1], and remove the Front Right Cover [2].



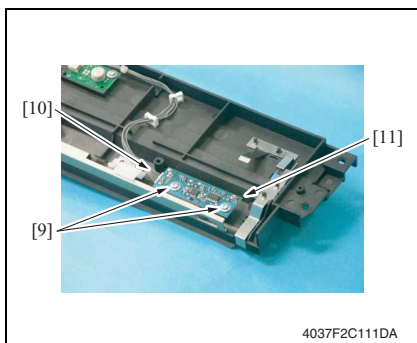
4. Remove the Connector [3].



5. Open the Right Door.
6. Remove four screws [4] and the Registration Roller entrance guide [5].



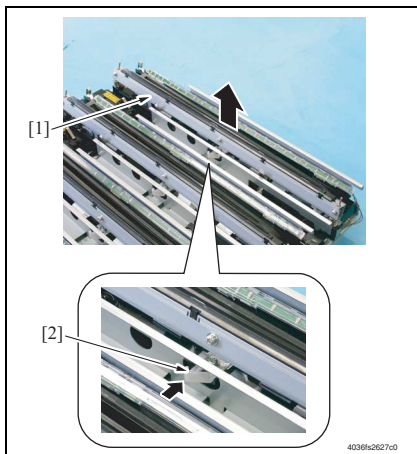
7. Remove three Screws [6] and Connector [7], and remove the IDC/Registration Sensor/1 [8].



8. Remove two Screws [9] and Connector [10], and remove the IDC/Registration Sensor/2 [11].

NOTE

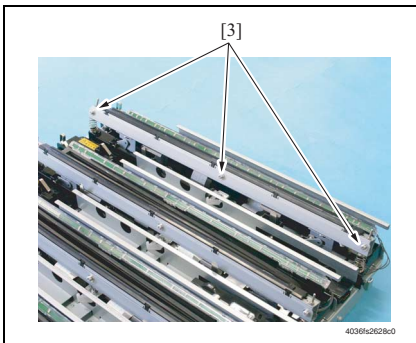
- Whenever the IDC/Registration Sensor/1,2 have been replaced, be sure to replace the Image Transfer Belt Unit.

6.3.54 LPH**A. Removal Procedure**

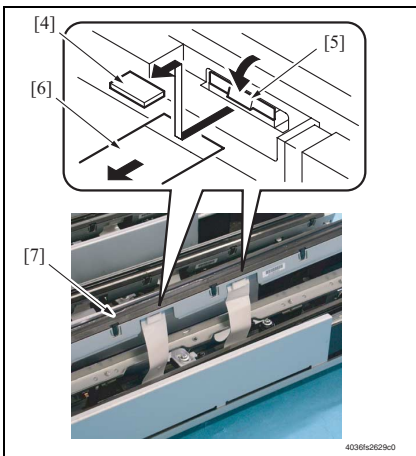
1. Remove the LPH Unit.
2. Holding the LPH Assy [1] with hands, unlock [2] it.

NOTE

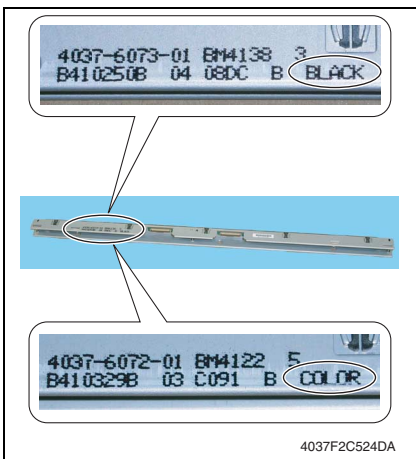
- Do not touch the LED by hand. Clean the LED, if touched by hand, using the LED cleaning jig.
- Be careful about the spring that can spring off when the LPH Assy is unlocked.
- If the LPH Assy comes off position when the Lock is unlocked, the LPH Assy must be installed using the LPH Assy mounting jig.



3. Remove the three LPH mounting screws [3].



4. Peel off the seal [4], unlock [5] the LPH Assy, and remove the flat cable [6].
5. Remove the LPH [7].
6. Perform the same procedure for each of different colors of LPH.



B. Reinstallation Procedure

NOTE

- The LPH comes in two types, one for black and the other for color (common to Y, M, and C). At replacement, make sure of the type of the LPH, whether it is for black or color.

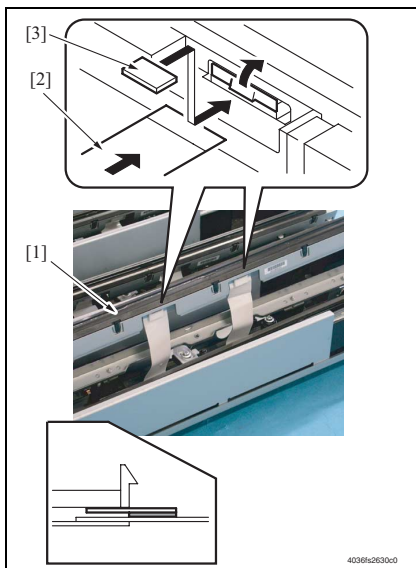
<Check method>

Determine the type of LPH using the marking on the side face of the LPH.

The markings are:

LPH for black: BLACK

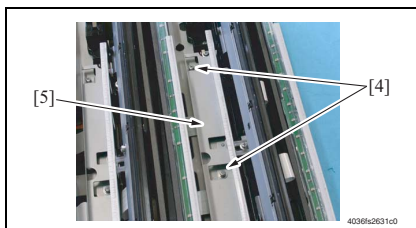
LPH for color: COLOR



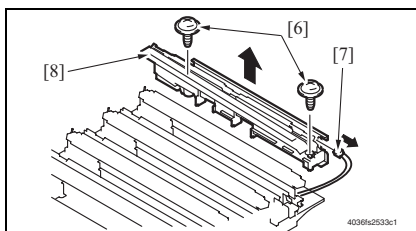
1. Insert the flat cable [2] into the LPH [1] and lock the LPH [1].
2. Affix the seal [3] that comes with the LPH Assy to the location shown on the left.

NOTE

- **Failure to affix the seal could cause the flat cable to come off the LPH Assy.**

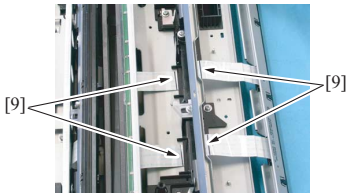


3. Remove two screws [4] and the Guide [5].

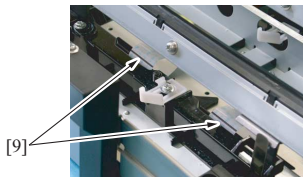


4. Remove two Screws [6] and Connector [7], and remove the guide Assy [8].

<LPH C/Bk>



<LPH Y/M>



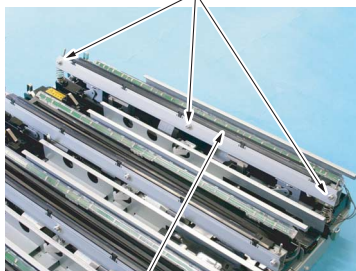
4036fs2634c0

5. Align the markings [9] on the flat cable with the positions shown in the photo.
6. Install the Guide.

NOTE

- **Make sure that no part of the flat cable is wedged in mechanisms or bent.**

[11]



[10]

4036fs2632c0

7. Secure the LPH [10] using three screws [11].

[12]



4036fs2635c0

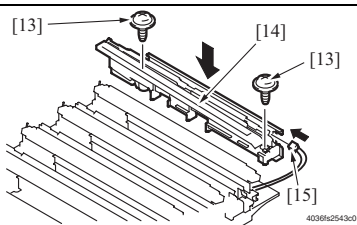
8. Push the slack portion in the flat cable [12] into the inside of the machine.

[13]

[14]

[13]

[15]



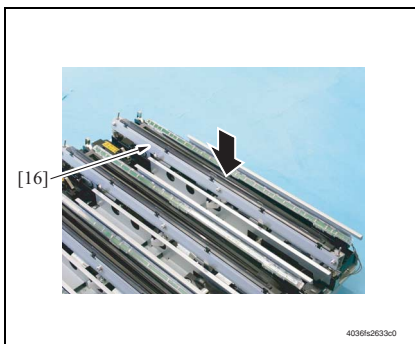
4036fs2543c0

9. Install the two screws [13] to secure the guide Assy [14].

10. Connect the connector [15].

NOTE

- **Make sure that no part of the flat cable is wedged in mechanisms or bent.**
- **Make sure that the flat cable is aligned with the groove in the Guide Assy.**

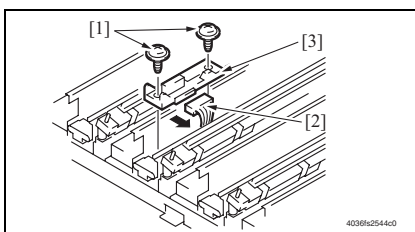


11. Press the LPH Assy [16] down into the locked position.

NOTE

- Select “Service Mode” → “Machine” → “LPH Rank” and change the value of “LPH Rank” to “1”.
- When the LPH Unit has been reinstalled, be sure to run “Stabilizer” available from “Image Process Adjustment” of the Service Mode.

6.3.55 TCR Sensor Y/M/C (PWB-N1/-N2/-N3)



1. Remove the LPH Unit.
2. Remove two screws [1], unplug the connector [2], and remove the TCR Sensor.

NOTE

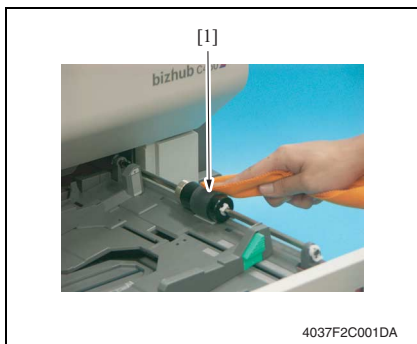
- When the TCR Sensor has been reinstalled, be sure to run “Stabilizer” available from “Image Process Adjustment” of the Service Mode.

6.4 Cleaning procedure

NOTE

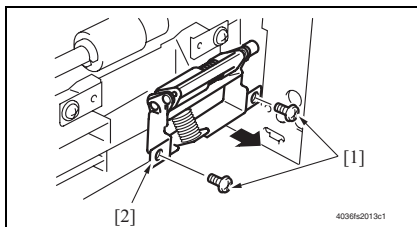
- The alcohol described in the cleaning procedure represents the isopropyl alcohol.

6.4.1 Tray 1 Paper Take-up Roller

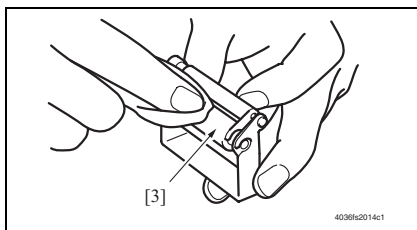


1. Slide out the Tray 1.
2. Using a soft cloth dampened with alcohol, wipe the Tray 1 Paper Take-Up Roller [1] clean of dirt.

6.4.2 Tray 1 Separation Roller

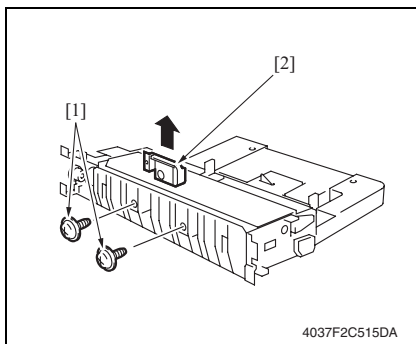


1. Slide out the Tray 1.
2. Remove two screws [1] and the Tray 1 Paper Separation Roller mounting bracket Assy [2].

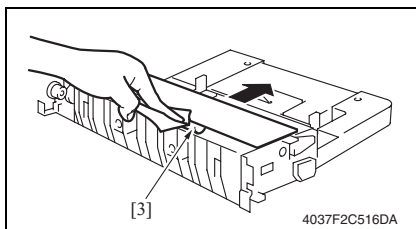


3. Using a soft cloth dampened with alcohol, wipe the Tray 1 Separation Roller [3] clean of dirt.

6.4.3 Bypass Tray Paper Take-up Roller

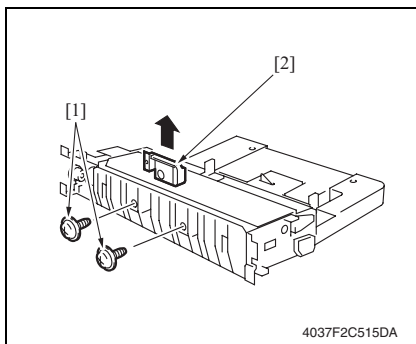


1. Remove the Multi Bypass Unit.
77
2. Remove two screws [1], and remove the Bypass Paper Separation Roller fixing bracket Assy [2].

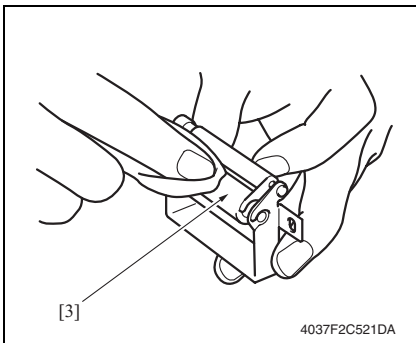


3. Using a soft cloth dampened with alcohol, wipe the Bypass Paper Take-up Roller [3].

6.4.4 Bypass Tray Separation Roller

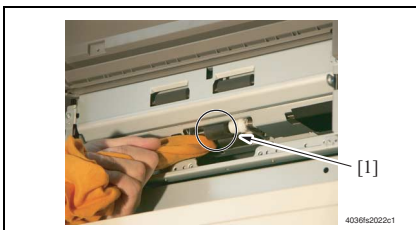


1. Remove the Multi Bypass Unit.
77
2. Remove two screws [1], and remove the Bypass Paper Separation Roller fixing bracket Assy [2].



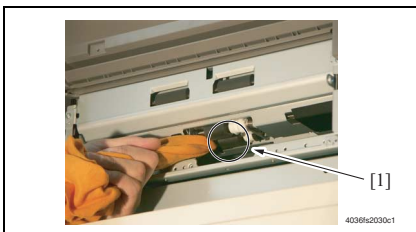
- Using the soft cloth dampened with alcohol, wipe the Bypass Paper Separation Roller [3].

6.4.5 Tray 2 Paper Take-up Roller



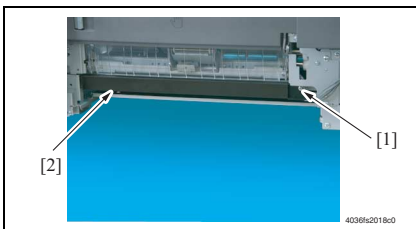
- Remove the Tray 2 Separation Roller installation plate Assy.
- See the procedures 1 to 7 in page 123 "Cleaning of Tray 2 Separation Roller."
- Using a soft cloth dampened with alcohol, wipe the Tray 2 Paper Take-up Roller [1].

6.4.6 Tray 2 Pick-up Roller

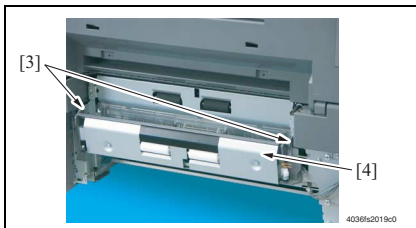


- Remove the Tray 2 Separation Roller installation plate Assy.
- See the procedures 1 to 7 in page 123 "Cleaning of Tray 2 Separation Roller."
- Using a soft cloth dampened with alcohol, wipe the Tray 2 Pick-up Roller [1].

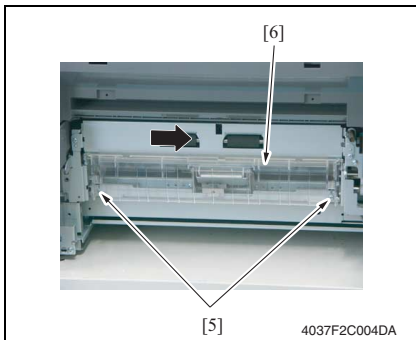
6.4.7 Tray 2 Separation Roller



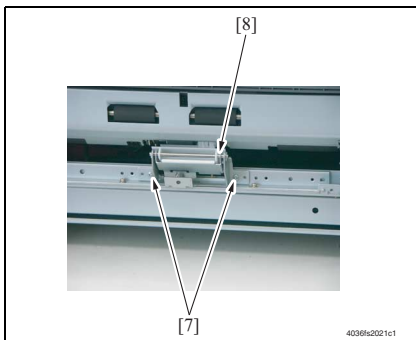
- Slide out the Tray 2.
- Remove the Multi Bypass unit.
- Remove the Screw [1], and the Reinforcement plate [2].



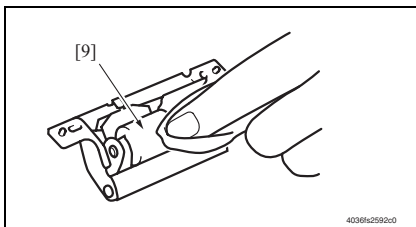
4. Open the Vertical transport door.
5. Remove two Claws [3] and the Vertical transport door [4].



6. Remove two Screws [5], and remove the Jam processing cover [6].

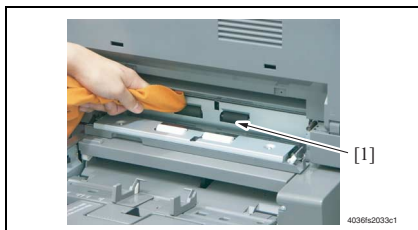


7. Remove two Screws [7] and the Tray 2 Separation Roller installation plate Assy [8].



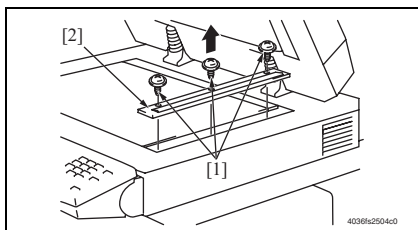
8. Using a soft cloth dampened with alcohol, wipe the Tray 2 Separation Roller [9].

6.4.8 Tray 2 Transport Roller

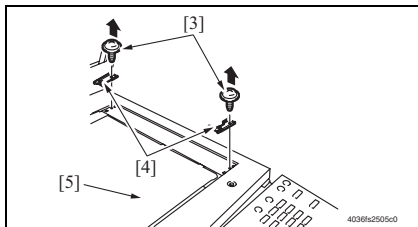


1. Open the Vertical transport door.
2. Using a soft cloth dampened with alcohol, wipe the Tray 2 Transport Roller [1].

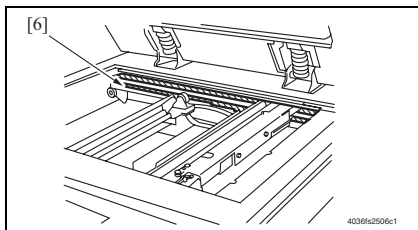
6.4.9 Scanner Rail



1. Remove three screws [1] and the IR Upper Right Cover [2].



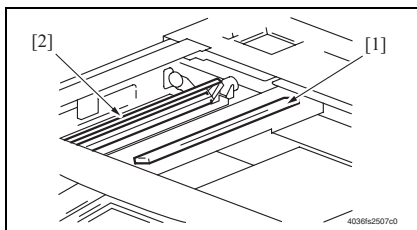
2. Remove two screws [3] and two Original Glass fixing brackets [4] (at the front and rear).
3. Remove the Original Glass [5].



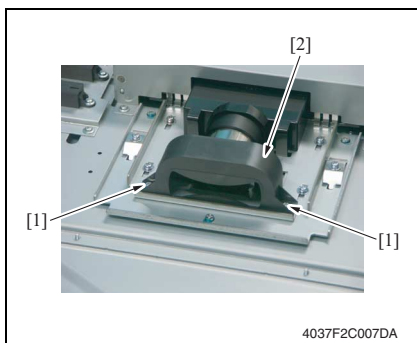
4. Using a soft cloth dampened with alcohol, wipe the Scanner Rails [6] clean of dirt.

NOTE

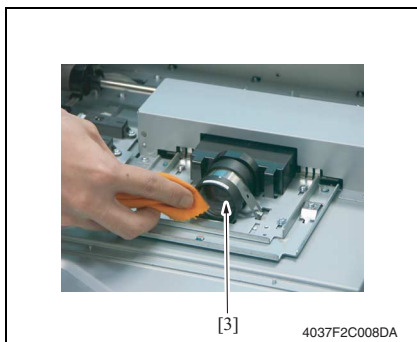
- Apply lubricant after cleaning.

6.4.10 Mirrors (1st/2nd/3rd)

1. Remove the Original Glass.
- 55
2. Using a soft cloth dampened with alcohol, wipe the Mirror 1 [1] and Mirror 2/3 [2].

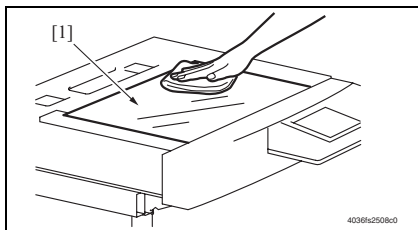
6.4.11 Lens

1. Remove the Original Glass.
- 55
2. Remove two Screws [1] and Lens cover [2].



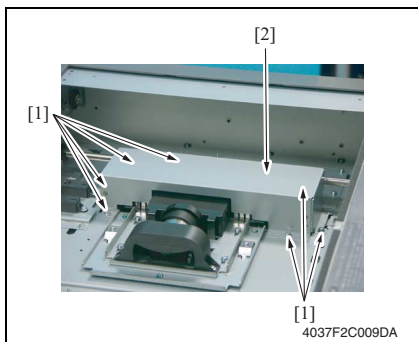
3. Using a soft cloth dampened with alcohol, wipe the Lens [3] clean of dirt.

6.4.12 Original Glass

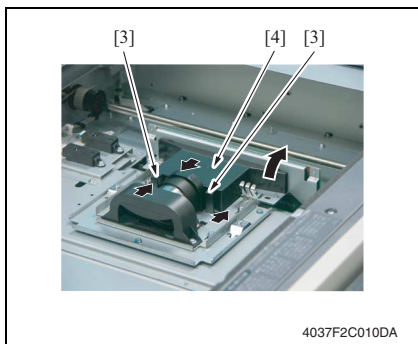


1. Using a soft cloth dampened with alcohol, wipe the Original Glass [1] clean of dirt.

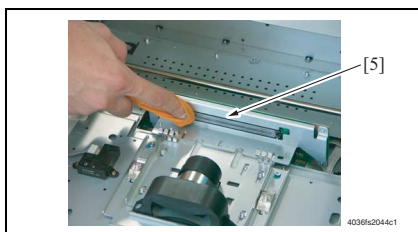
6.4.13 CCD Sensor



1. Remove the Original Glass.
2. Remove seven Screws [1] and CCD Unit protective cover [2].

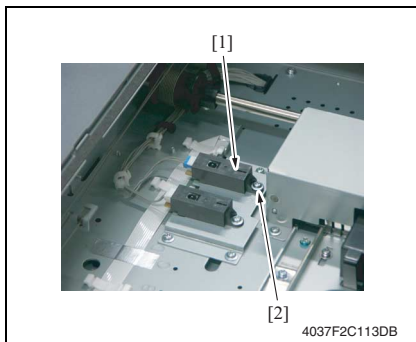


3. Remove two hooks [3] and the lens cover [4].



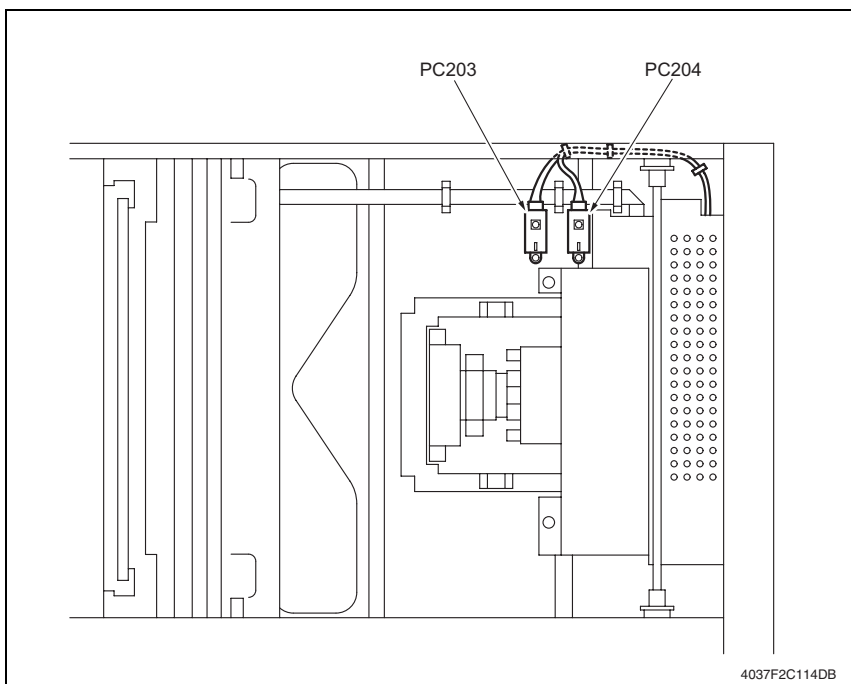
4. Using a soft lint free cloth dampened with alcohol, wipe the CCD Sensor [5] clean of dirt.

6.5 Mount the original size detecting sensor FD2 (PC204)



1. Remove the Original glass.
2. Using the screw [2], mount the Original Size Detection Sensor FD2 (PC204) [1] and fix it.

<How to set the Harness>



Original Size Detection Change

Copy Glass

Table1

Table2

ADF

Set

Unset

4037F2E530DA

3. Select Service Mode -> System 1 -> Original Size Detection, and set the Original Glass to "Table2."

Org. Size Detecting Sensor Adjustment

Adjustment Result
OK

Org. Size Detecting Sensor (Option): Set

Sensor 1
OK

Sensor 2
OK

Sensor 3
OK

Sensor 4
OK

Sensor 5
OK

Sensor 6
OK

Sensor 7
OK

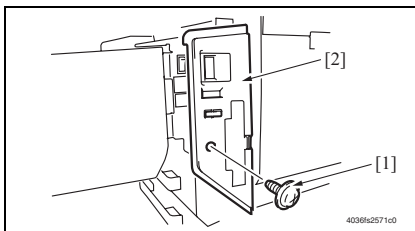
Sensor 8
OK

4037F2E531DA

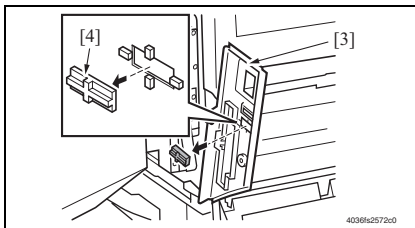
4. Select "Service Mode" → "Machine" → "Org. Size Detecting Sensor Adj."
- 226
5. Check to make sure that the "Org. Size Detecting Sensor (Option): Set" is displayed on the Original Size Detection Sensor Adjustment screen.

6.6 Option counter

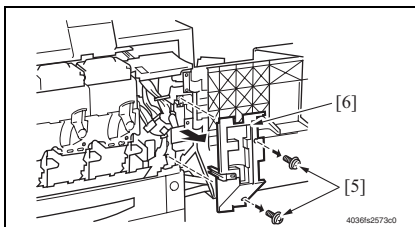
6.6.1 Installation of The Counter/K



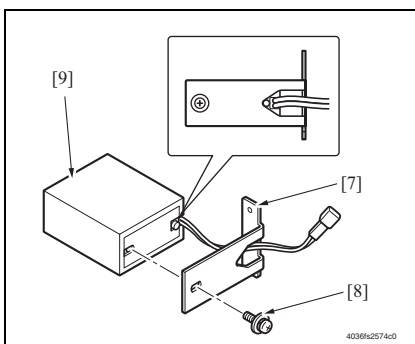
1. Open the Front Door.
2. Remove the Panel Cover.
3. Remove the Screw [1], and remove the Front Right Cover [2].



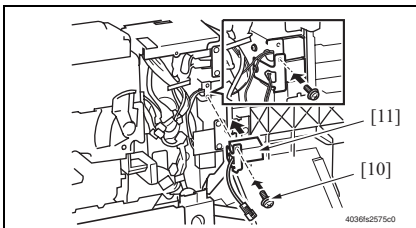
4. Cut out the knockout [4] in the Front Right Cover [3].



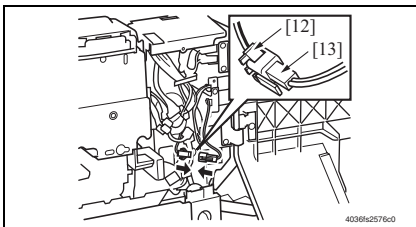
5. Remove two screws [5] and the Right Front Cover [6].



6. Install the Mounting plate [7] on the Counter/K [9] with the Screw [8].

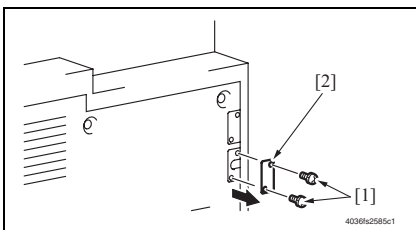


7. Secure the Counter/K [11] with the screw [10].



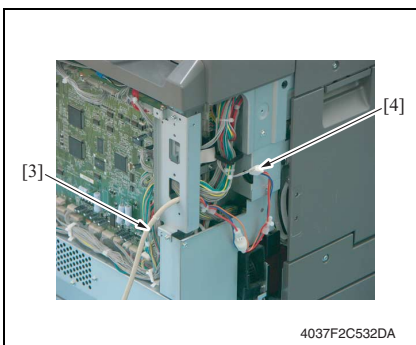
8. Mount the Connector [12] of Counter/K on the Relay Connector [13] at main body side.

6.6.2 Installation method for the Key Counter

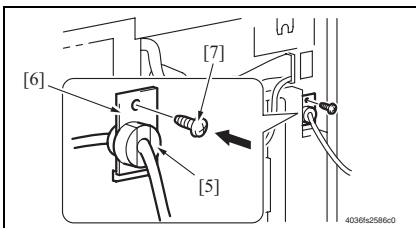


1. Remove two Screws [1], and remove the Cover [2].
2. Remove the Lower Rear Cover.

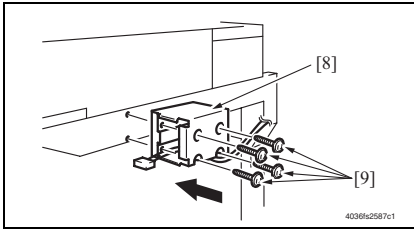
53



3. Pass the Key Counter Harness [3] through the hole.
4. Mount the Connector [4].



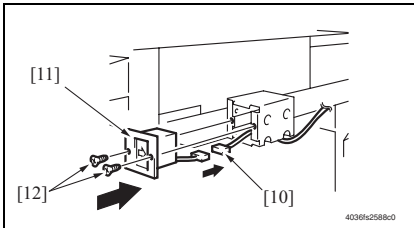
5. Secure the counter cable [5] and cable holder [6] with one screw [7].
6. Reinstall the Rear Cover.



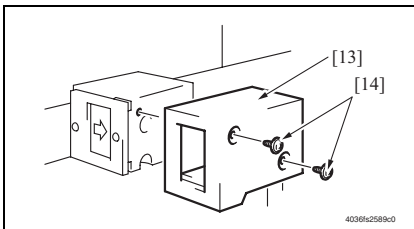
7. Using four screws [9], secure the Counter Mounting Bracket [8].

NOTE

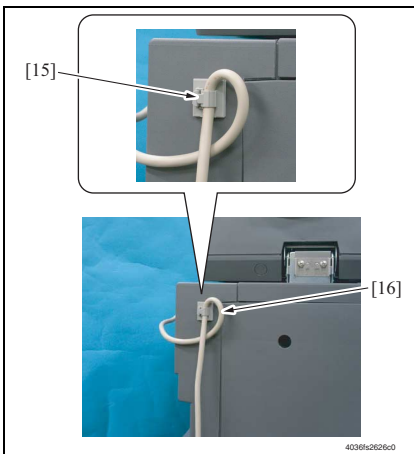
- **Secure the Counter Mounting Bracket passing the connector into the bracket.**
 - **Use the four long screws (9646-0418-14: M4x18) in the Key Counter Kit to secure the Counter Mounting Bracket.**
- When installing the Key Counter to the other products, use the short screws (9646-0408-14: M4x8).**



8. Connect the Key Counter Socket connector [10].
9. Using two screws [12], secure the counter socket [11].



10. Using two screws [14], secure the Key Counter Cover [13].



11. Fix the harness [16] with the cable clamp [15] as shown in the left figure.
12. Select Service Mode → "Billing Setting" → "Management Function Choice" → "Key Counter." Press "Set", and set Color Mode and Message.

For details on setting, see "Adjustment/Setting."

ineo+ 450

Maintenance

Blank Page

Adjustment/Setting

7. How to use the adjustment section

- “Adjustment/Setting” contains detailed information on the adjustment items and procedures for this machine.
- Throughout this “Adjustment/Setting,” the default settings are indicated by “ ”.

A. Advance Checks

- Before attempting to solve the customer problem, the following advance checks must be made. Check to see if:
 1. The power supply voltage meets the specifications.
 2. The power supply is properly grounded.
 3. The machine shares the power supply with any other machine that draws large current intermittently (e.g., elevator and air conditioner that generate electric noise).
 4. The installation site is environmentally appropriate: high temperature, high humidity, direct sunlight, ventilation, etc.; levelness of the installation site.
 5. The original has a problem that may cause a defective image.
 6. The density is properly selected.
 7. The Original Glass, slit glass, or related part is dirty.
 8. Correct paper is being used for printing.
 9. The units, parts, and supplies used for printing (developer, PC Drum, etc.) are properly replenished and replaced when they reach the end of their useful service life.
 10. Toner is not running out.

B. Precautions for Service Jobs

1. To unplug the power cord of the machine before starting the service job procedures.
2. If it is unavoidably necessary to service the machine with its power turned ON, use utmost care not to be caught in the Scanner Cables or gears of the Exposure Unit.
3. Special care should be used when handling the Fusing Unit which can be extremely hot.
4. The Developing Unit has a strong magnetic field. Keep watches and measuring instruments away from it.
5. Take care not to damage the PC Drum with a tool or similar device.
6. Do not touch IC pins with bare hands.

8. Utility Mode

8.1 Touch Panel Adj.

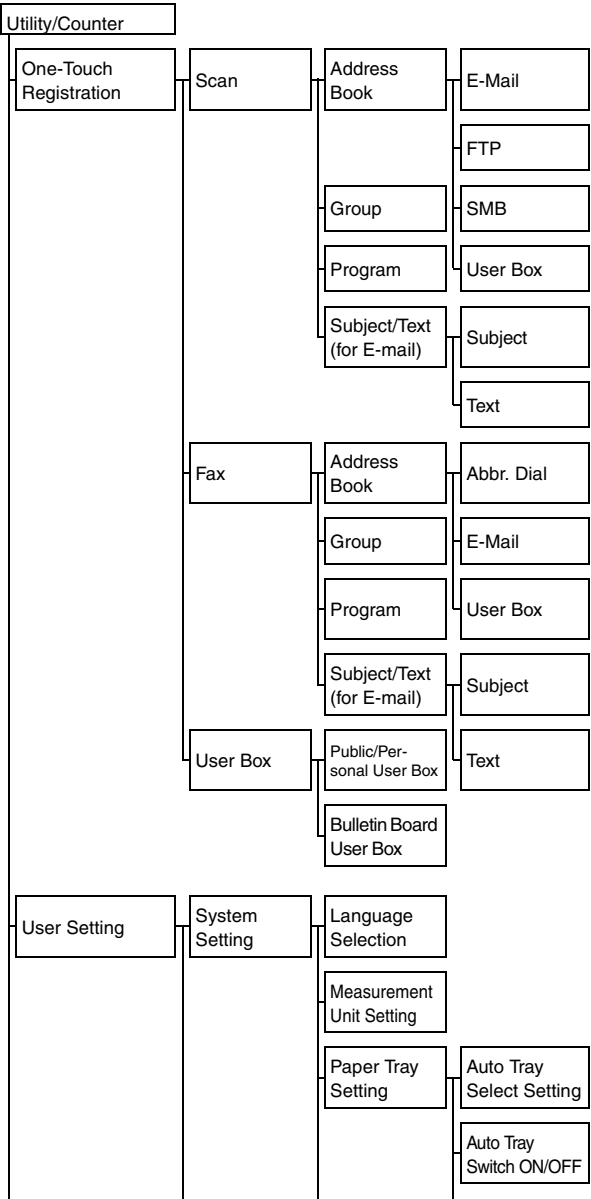
Functions	<ul style="list-style-type: none">To adjust the position of the Touch Panel display
Use	<ul style="list-style-type: none">Make this adjustment if the Touch Panel is slow to respond to a pressing action.Use during the setup procedure.
Adjustment Procedure	<div><div><div>1. Press the Accessibility key.</div><div>2. Touch "Touch Panel Adj."</div><div>3. Using the tip of a pen or similar object, touch the four crosses (+) on the screen in sequence.</div><div><ul style="list-style-type: none">These crosses may be touched in any order; but be sure to touch the center of each cross.Use care not to damage the screen surface with the tip of the pen.</div></div><div><div><div>Touch Panel Adjustment</div><div><div><div>Adjust the position of keys on touch screen. Touch 4 check keys located on corner and press START. To reset, press CLEAR. To cancel, press STOP.</div></div></div></div></div><div><div>4037F3E512DA</div><div><div>4. Touching all four crosses will turn the Start key ON in green.</div><div>5. Press the Start key.</div></div></div></div>

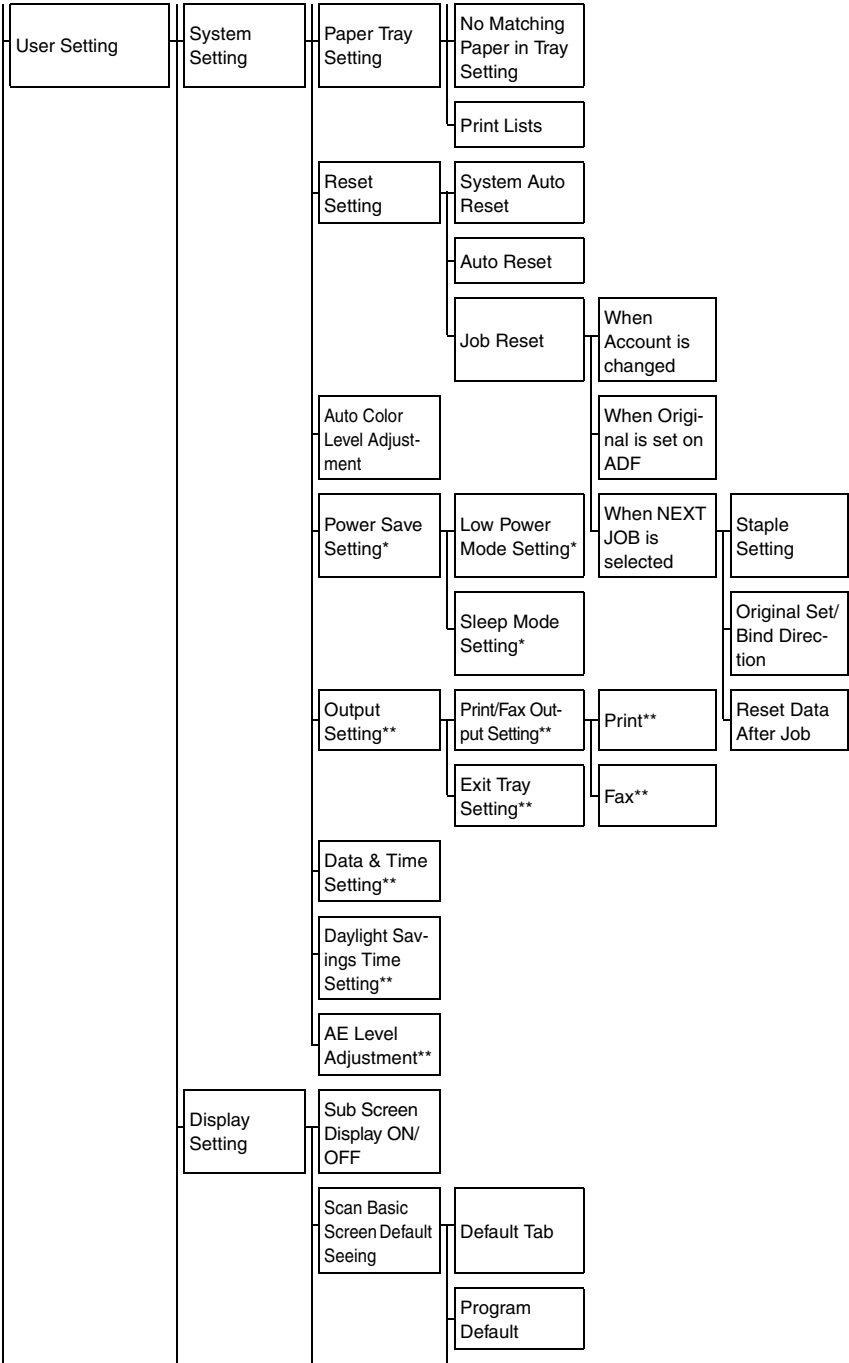
8.2 Utility Mode function tree

* The function tree is shown to comply with the format displayed on the screen.

NOTE

- Keys displayed on screens are different depending on the setting.
- For displaying the keys with *, ** marks, see 215 “Administrator Security Level.”
- For displaying the keys with *** marks, see 295 “Administrator Feature Level.”





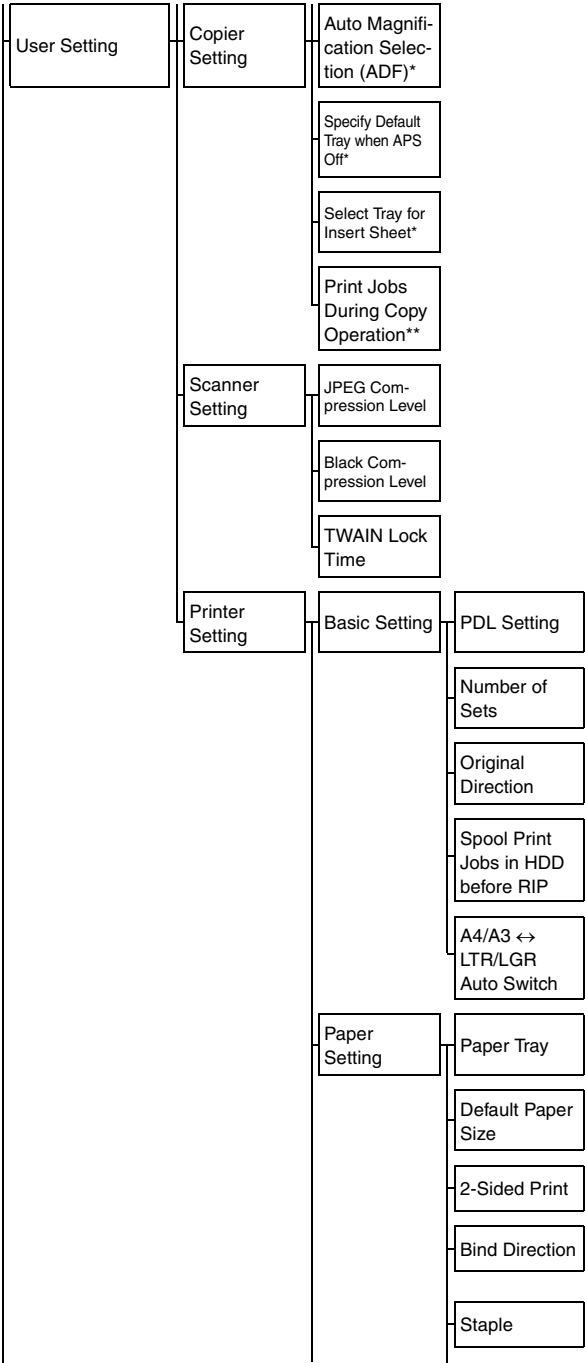
ineo+ 450

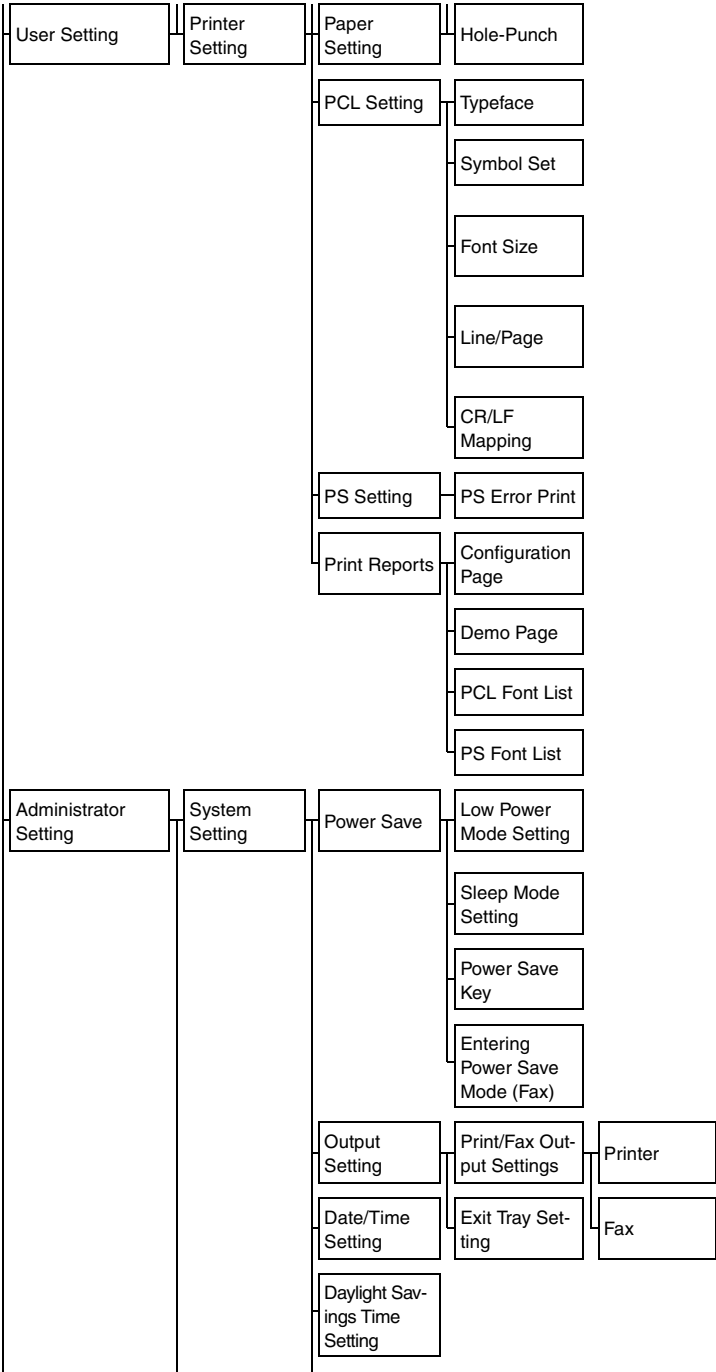
Adjustment / Setting

User Setting	Display Setting	Scan Basic Screen Default Seeing	Address Book Default Index
			Address Type Symbol Display
		Fax Basic Screen Default Setting	Default Tab
			Default Program
			Address Book Default Index
			Address Type Symbol Display
			No. of Characters for Dest. Display
		Copy Screen	Copy Operating Screen
		Fax Active Screen	TX Display
			RX Display
	Initial Setting		
	Copier Setting	Auto Paper Select for Small Original	
		Auto Booklet ON when Fold & Staple	
		Auto Zoom for Combine/Booklet	
		Sort/Group Auto Change	
		Auto Magnification Selection (Platen)*	

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Adjustment / Setting





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Adjustment / Setting

Administrator Setting	System Setting	Weekly Timer Setting	Weekly Timer ON/OFF Setting	
			Time Setting	
			Date Setting	
			Select Time for Power Save	
			Password for Non-Busi- ness Hours	
			Restrict User Access	Restrict Access to Saved Program Jobs
				Delete Saved Program Jobs
			Restrict Access to Job Settings	Changing Job Priority
				Deleting Other User's Jobs
				Registering and Chang- ing Addresses
		Expert Adjustment	AE Level Adjustment	Changing Zoom Ratio
			Printer Adjustment	Leading Edge Adjustment
				Centering
				Centering (Duplex 2nd Side)
				Vertical Adjustment ***
				Erase Lead- ing Edge ***
			Finisher Adjustment	Center Sta- ple Position

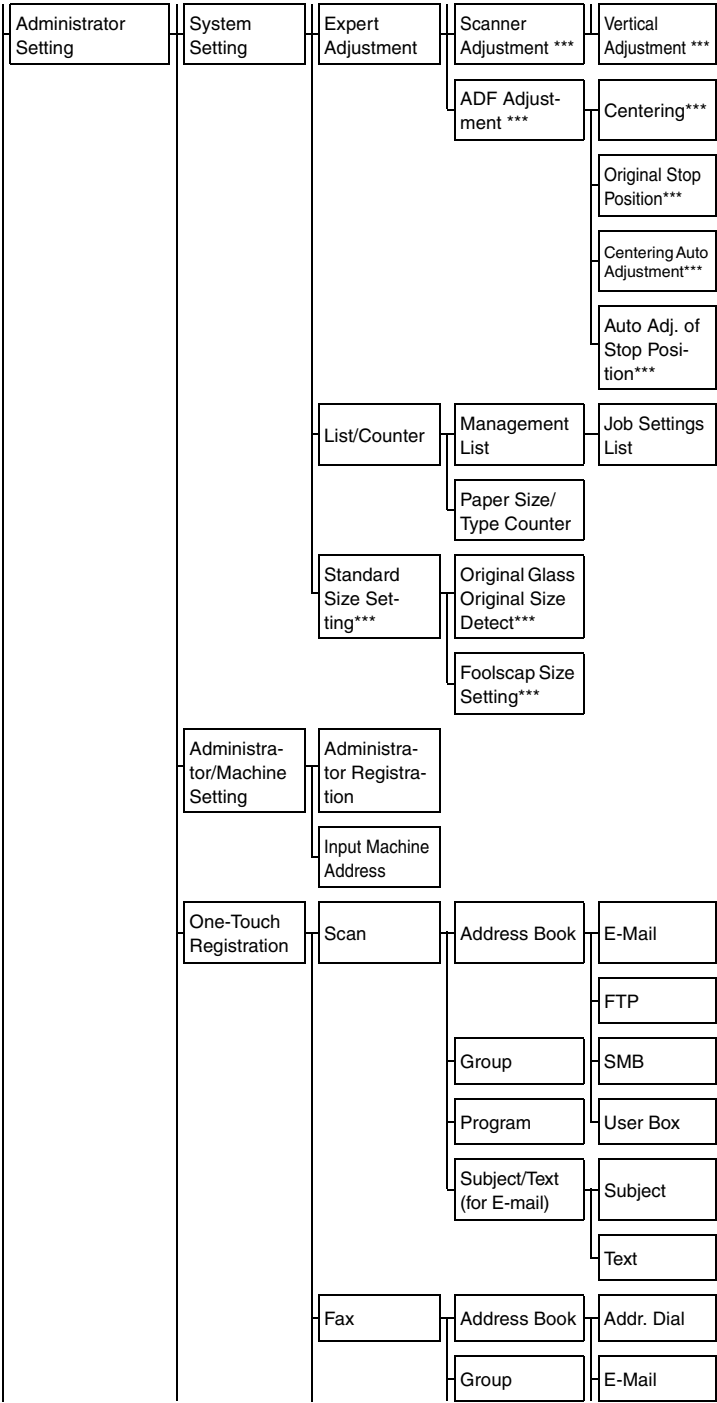
Administrator Setting	System Setting	Expert Adjustment	Finisher Adjustment	Half-Fold Position
			Density Adjustment	Thick Paper Image Den- sity–Yellow
				Thick Paper Image Den- sity–Magenta
				Thick Paper Image Den- sity–Cyan
			Image Stabilization	Thick Paper Image Den- sity–Black
			Thin Paper Duplex Mode	Black Image Density
			Color Regis- tration Adjust	Color Regis- tration Adjust (Yellow)
				Color Regis- tration Adjust (Magenta)
				Color Regis- tration Adjust (Cyan)
				Color Regis- tration Adjust (Black)
			Gradation Adjustment	Copy
				Printer (Gradation)
				Printer (Resolution)
			Scanner Adjustment ***	Leading Edge Adjustment ***
				Centering ***
				Horizontal Adjustment ***

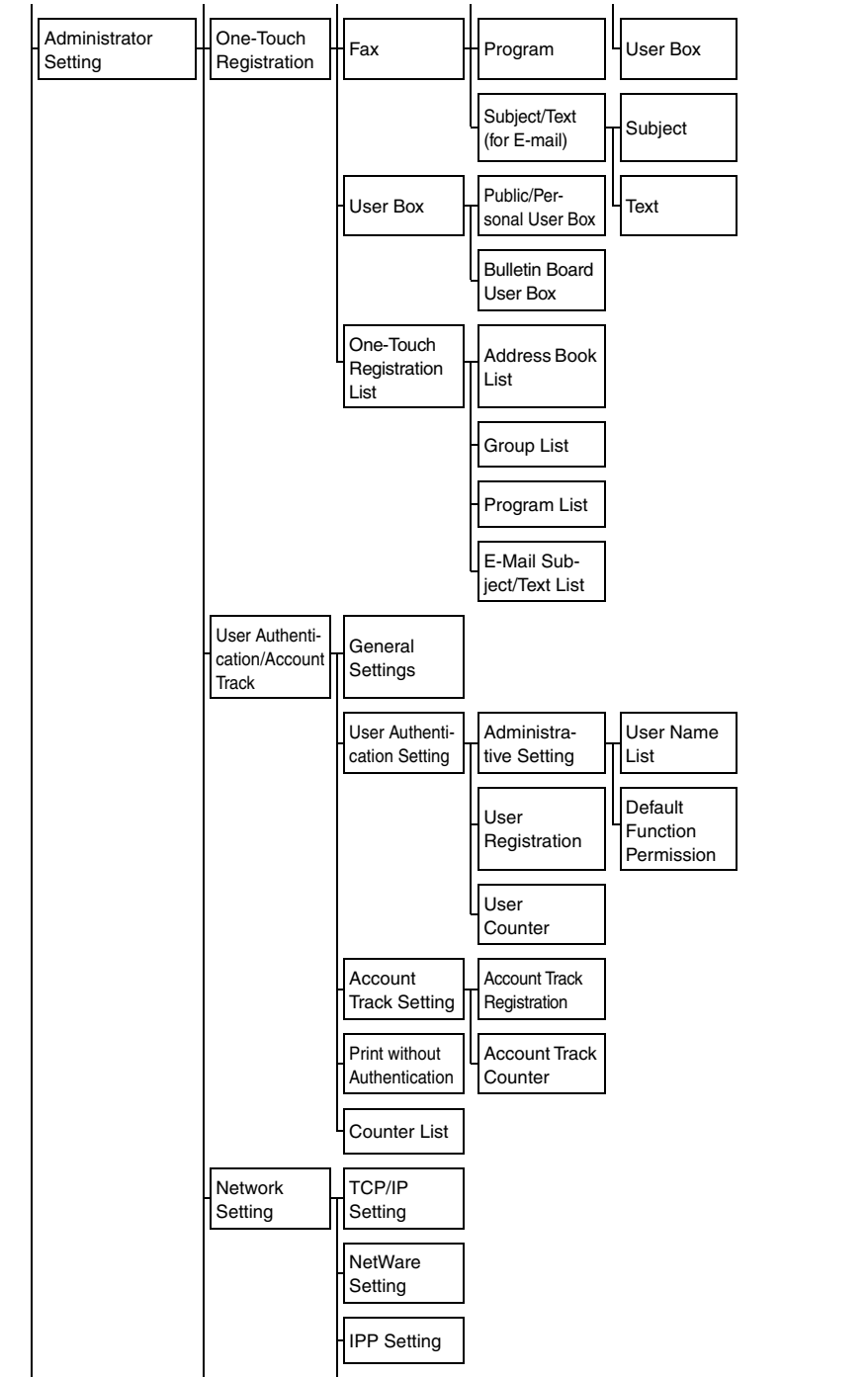
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Adjustment / Setting

ineo+ 450

Adjustment / Setting



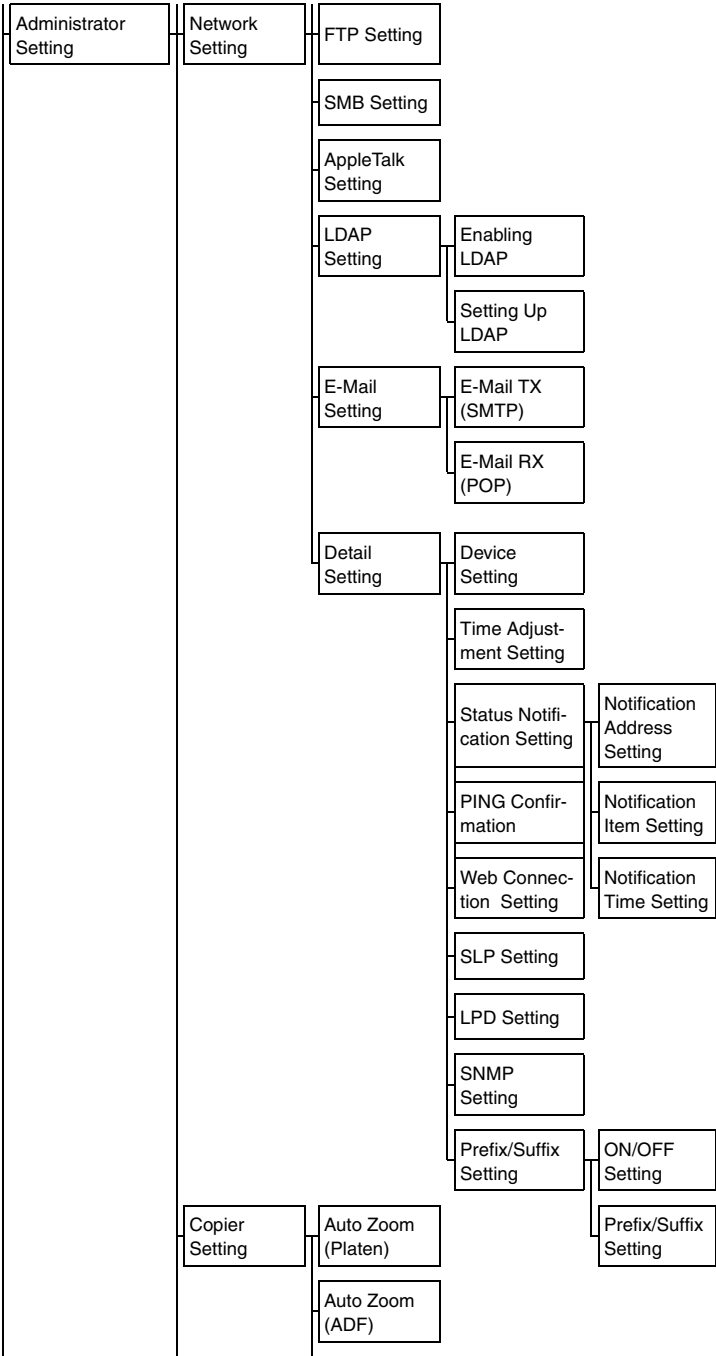


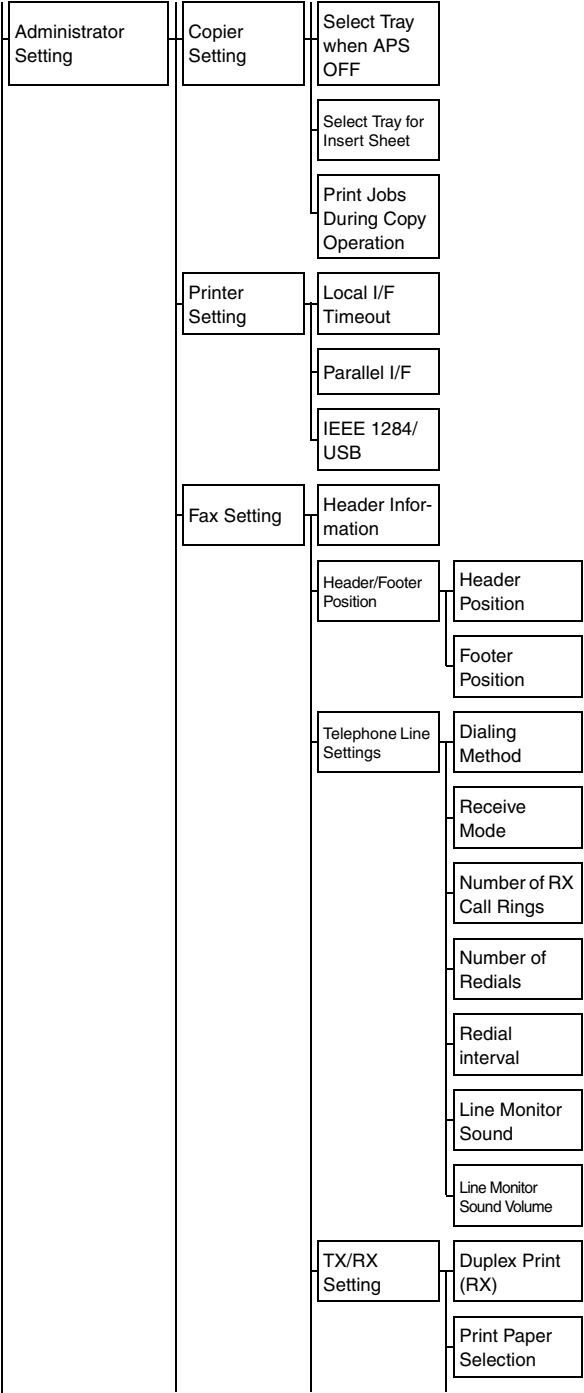
ineo+ 450

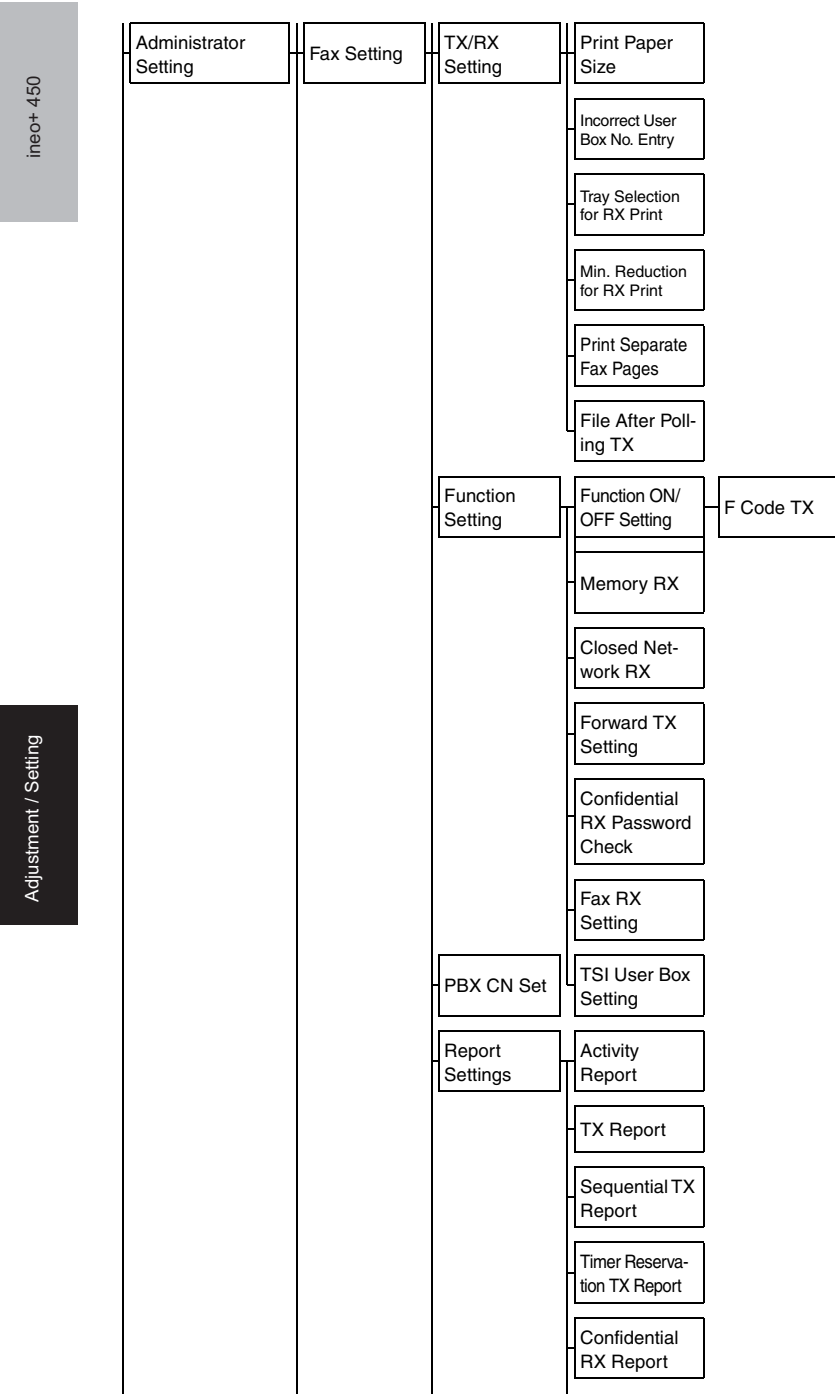
Adjustment / Setting

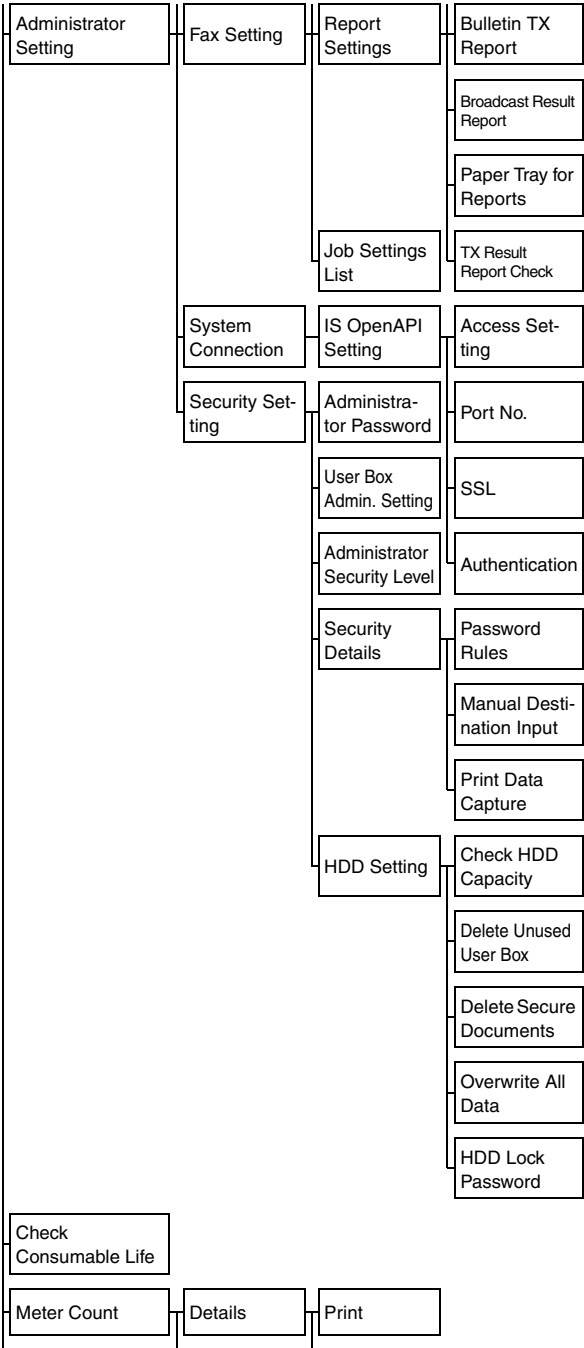
ineo+ 450

Adjustment / Setting

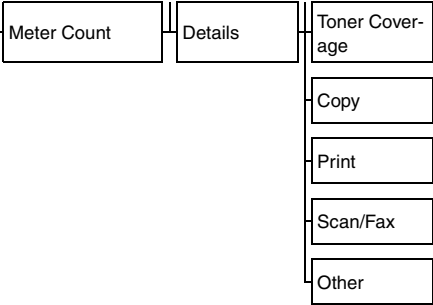








ineo+ 450

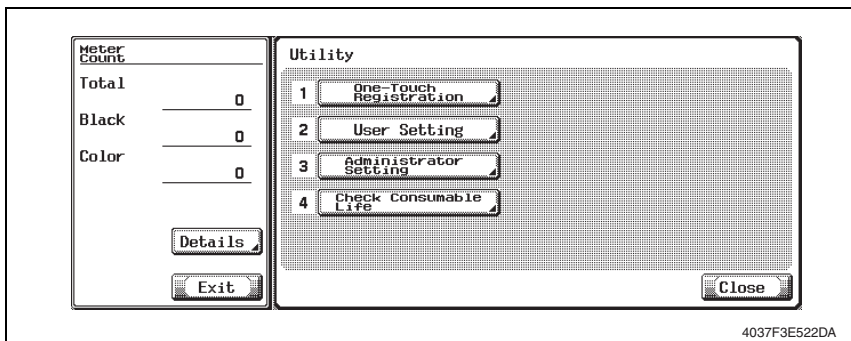


Adjustment / Setting

8.3 Utility Mode function setting procedure

8.3.1 Procedure

1. Press the Utility/Counter key.
2. The Utility mode screen will appear.



8.3.2 Exiting

- Touch the "Close" key.

8.3.3 Changing the setting value in Utility Mode functions

- Use the +/- key to enter or change the setting value.
- Use the 10-Key Pad to enter the setting value. (To change the setting value, first press the Clear key before making an entry.)

8.4 One-Touch Registration

8.4.1 Scan

A. Address Book

(1) E-Mail

Functions	<ul style="list-style-type: none"> To register/change e-mail address to send scanned data.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> A new address can be registered by touching "New" key. Select any displayed address to check, change or delete the setting.

(2) FTP

Functions	<ul style="list-style-type: none"> To register/change FTP address to send scanned data.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> A new address can be registered by touching "New" key. Select any displayed address to check, change or delete the setting.

(3) SMB

Functions	<ul style="list-style-type: none"> To register/change SMB address to send scanned data.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> A new address can be registered by touching "New" key. Select any displayed address to check, change or delete the setting.

(4) User Box

Functions	<ul style="list-style-type: none"> To register/change the Box address when storing the scanned data in the box in the hard disk in the main unit.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> A new address can be registered by touching "New" key. Select any displayed address to check, change or delete the setting.

B. Group

Functions	<ul style="list-style-type: none"> To register/change a group to send scanned data simultaneously.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> A new address can be registered by touching "New" key. Select any displayed group to check, change or delete them. At least one address must be registered for registering a new group.

C. Program

Functions	<ul style="list-style-type: none"> To register/change the Scan Program.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> Select any program No. to register, check, change, or delete the setting.

D. Subject/Text (for E-mail)**(1) Subject**

Functions	<ul style="list-style-type: none"> To register the e-mail subject when transmitting the scanned data.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> A new address can be registered by touching "New" key. Select any displayed address to check, change or delete the setting.

(2) Text

Functions	<ul style="list-style-type: none"> To register the e-mail message when transmitting the scanned data.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> A new address can be registered by touching "New" key. Select any displayed address to check, change or delete the setting.

8.4.2 Fax**A. Address Book****(1) Abbr. Dial**

Functions	<ul style="list-style-type: none"> To register/change the Fax numbers.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> A new address can be registered by touching "New" key. Select any displayed address to check, change or delete the setting.

(2) E-Mail

Functions	<ul style="list-style-type: none"> To register/change the e-mail address when transmitting the Fax data.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> A new address can be registered by touching "New" key. Select any displayed address to check, change or delete the setting.

(3) User Box

Functions	<ul style="list-style-type: none"> To register/change the Box address when storing the Fax original in the box of the hard disk in the machine.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> A new address can be registered by touching "New" key. Select any displayed address to check, change or delete the setting.

B. Group

Functions	<ul style="list-style-type: none"> To register/change a group of addresses to send Fax data simultaneously.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> A new group can be registered by touching "New" key. Select any displayed group to check, change or delete the setting. At least one address should be registered in order to register the group.

C. Program

Functions	<ul style="list-style-type: none"> To register/change the Fax program.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> Select any program No. to register, check, change or delete the setting.

D. Subject/Text (for E-mail)**(1) Subject**

Functions	<ul style="list-style-type: none"> To register the e-mail subject when transmitting the Fax original.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> A new subject can be registered by touching "New" key. Select any displayed subject to check, change or delete the setting.

(2) Text

Functions	<ul style="list-style-type: none"> To register the e-mail message when transmitting the Fax original.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> A new message can be registered by touching "New" key. Select any displayed message to check, change or delete the setting.

8.4.3 User Box**A. Public/Personal User Box**

Functions	<ul style="list-style-type: none"> To register/change the box for storing text data in the hard disk of the machine.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> Shared or personal box can be registered according to its intended use. A new box can be registered by touching "New" key. Select any displayed box to change or delete it.

B. Bulletin Board User Box

Functions	<ul style="list-style-type: none"> To register/change the Bulletin Board User Box.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> A new box can be registered by touching "New" key. Select any displayed box to change or delete it.

8.5 User Setting

8.5.1 System Setting

A. Language Selection

Functions	• To select the language on the LCD display
Use	• To change the language on the control panel to another language.
Setting/ Procedure	• The language options depend on the marketing area selected in "Marketing Area" available from "System 1" under Service Mode.

B. Measurement Unit Setting

Functions	• To select the unit displayed on the LCD display.
Use	• To change the unit displayed on the control panel.
Setting/ Procedure	<ul style="list-style-type: none"> • The default setting varies depending on the marketing area <div> mm (Numerical Value) inch (Numerical Value) inch (Fraction) </div>

C. Paper Tray Setting

(1) Auto Tray Select Setting

Functions	<ul style="list-style-type: none"> • To set the Tray for automatic selection when APS is being set. • To establish the priority for switching the Tray when ATS is being set.
Use	<ul style="list-style-type: none"> • To specify the Tray to be used when APS is being set. • To establish the priority of the Tray when ATS is being set.
Setting/ Procedure	<ul style="list-style-type: none"> • Select the Tray on the Auto Tray Select screen. • Set the priority on the Tray priority screen.

(2) Auto Tray Switch ON/OFF

Functions	<ul style="list-style-type: none"> To set whether to automatically switch to another Tray with same size paper when the Paper Take-up Tray runs out of paper during printing.
Use	<ul style="list-style-type: none"> To switch the Paper Take-up Tray automatically.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Restrict. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> Allow "Restrict" </div>

(3) No Matching Paper in Tray Setting

Functions	<ul style="list-style-type: none"> To set whether to switch to another Tray automatically when the specified Tray runs out of paper during printing. <p>Stop Printing (Tray Fixed) : It stops printing when the specified Tray runs out of paper.</p> <p>Switch Trays (Tray Priority): To switch to another Tray with the specified paper and print when the Tray is out of paper</p>
Use	
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Stop Printing (Tray Fixed). <p>“Stop Printing (Tray Fixed)” Switch Trays (Tray Priority)</p>

(4) Print Lists

Functions	<ul style="list-style-type: none"> To set the Paper Take-up Tray for output the list for the Meter count or the Unit check.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is "Tray 1."

D. Reset Setting**(1) System Auto Reset**

Functions	<ul style="list-style-type: none"> To set the period of time until System Auto Reset starts functioning.
Use	<ul style="list-style-type: none"> To change the period of time until System Auto Reset starts functioning.
Setting/ Procedure	<p><Priority Mode></p> <ul style="list-style-type: none"> To set the functions displayed during System Auto Reset from Copier, Scanner, and the Fax. The default setting is Copy. <p style="text-align: center;">"Copy" Scan Fax</p> <p><System Auto Reset Time></p> <ul style="list-style-type: none"> The default setting is 1 min. <p style="text-align: right;">"1 min." (1 to 9, OFF)</p>

(2) Auto Reset

Functions	<ul style="list-style-type: none"> To set the period of time until Auto Reset starts functioning in "Copier", "Scanner", and the "Fax."
Use	<ul style="list-style-type: none"> To change the period of time until Auto Reset starts functioning.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is 1 min. <p style="text-align: right;">"1 min." (1 to 9, OFF)</p>

(3) Job Reset

<When Account is changed>

Functions	<ul style="list-style-type: none"> To select whether to reset the copying mode functions to the default ones when the Key Counter is unplugged, a magnetic card is pulled out, User Authentication/Volume Track is set.
Use	<ul style="list-style-type: none"> To select not to reset to the default settings even when the accounts are changed through the use of a data management device.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Reset. <p style="text-align: center;">"Reset" Do Not Reset</p>

<When Original is set on ADF>

Functions	<ul style="list-style-type: none"> To set whether to set the copy mode to the default setting when the original is set to ADF.
Use	<ul style="list-style-type: none"> To reset the copy mode to the default setting when the original is set to ADF.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Do Not Reset. <p style="text-align: center;">Reset "Do Not Reset"</p>

<When NEXT JOB is selected: Staple Setting>

Functions	<ul style="list-style-type: none">To set whether to cancel the staple setting when the Staple setting job started and the next job setting has become available.
Use	
Setting/ Procedure	<ul style="list-style-type: none">The default setting is OFF. <div>ON"OFF"</div>

<When NEXT JOB is selected: Original Set / Bind Direction>

Functions	<ul style="list-style-type: none">To set whether to cancel the Original Set/Bind direction when the job (which original set/bind direction is set) started and the next job setting has become available.
Use	
Setting/ Procedure	<ul style="list-style-type: none">The default setting is OFF. <div>ON"OFF"</div>

<When NEXT JOB is selected: Reset Data After Job>

Functions	<ul style="list-style-type: none">To set whether to cancel the setting for scanning or transmitting Fax when the scanning is finished or Fax is transmitted, making the next job setting available. (The address will be cleared even when "OFF" is selected.)
Use	
Setting/ Procedure	<ul style="list-style-type: none">The default setting is OFF. <div>ON"OFF"</div>

E. Auto Color Level Adjustment

Functions	<ul style="list-style-type: none">To set the criterion level to discriminate between a colored original and a black-and-white original in the Auto Color mode
Use	
Setting/ Procedure	<ul style="list-style-type: none">Five levels are available to choose from and the default setting is 3. <div>BlackStandardFull Color 12"3"45</div>

8.5.2 Display Setting

A. Sub Screen Display ON/OFF

Functions	<ul style="list-style-type: none">To set the Sub Screen Display on the control panel.
Use	<ul style="list-style-type: none">To change the Sub Screen Display. Setting Value : An illustration of the selected key will be displayed Job List : The list of job which are being executed will be displayed
Setting/ Procedure	<ul style="list-style-type: none">The default setting is Setting Value. <div>"Setting Value"Job List</div>

B. Scan Basic Screen Default Seeing**(1) Default Tab**

Functions	• To set the Basic Screen display in Scanner mode.
Use	• To change the Basic Screen display in Scanner mode.
Setting/ Procedure	• The default setting is Program. "Program" Group Address Book Direct Input

(2) Program Default

Functions	• To set the default display for the program screen during Scanner mode.
Use	• To keep the default display on the program screen which frequently changes during scanner mode
Setting/ Procedure	• The default setting is PAGE 1. Temporary One-Touch / "PAGE1" to PAGE27

(3) Address Book Default Index

Functions	• To set the default display for the Address Book screen during Scanner mode.
Use	• To keep the default display instead of search string on the Address Book which frequently changes during Scanner mode.
Setting/ Procedure	• The default setting is Main. "Main" /ABC to WXYZ / etc

(4) Address Type Symbol Display

Functions	• To set whether to display the Address Type Symbol on each address key when selecting the address to transmit scanned data.
Use	• To cancel displaying the Address Type Symbol on the address key.
Setting/ Procedure	• The default setting is ON. "ON" OFF

C. Fax Basic Screen Default Setting**(1) Default Tab**

Functions	• To set the basic screen display during Fax mode.
Use	• To change the basic screen display during Fax mode.
Setting/ Procedure	• The default setting is Program. "Program" Group Address Book Direct Input

(2) Default Program

Functions	• To set the default display for the program screen during Fax mode.
Use	• To keep the default display on the program screen which frequently changes during Fax mode.
Setting/ Procedure	• The default setting is PAGE 1. Temporary One-Touch / "PAGE1" to PAGE27

(3) Address Book Default Index

Functions	<ul style="list-style-type: none"> To set the default display for abbreviation/address screen during Fax mode.
Use	<ul style="list-style-type: none"> To keep the default display instead of abbreviations/address search string which frequently changes during Fax mode.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Main. "Main" / ABC to WXYZ / etc

(4) Address Type Symbol Display

Functions	<ul style="list-style-type: none"> To set whether to display the Address Type symbol on each address key when selecting the address to transmit Fax.
Use	<ul style="list-style-type: none"> To cancel displaying the Address Type symbol on each address key.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is ON. "ON" OFF

(5) No. of Characters for Dest. Display

Functions	<ul style="list-style-type: none"> To set the number of characters for the address displayed on the address key when selecting the address to transmit Fax.
Use	<ul style="list-style-type: none"> To display the whole address which consists of over fifteen characters.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is 14 char. "14 char." 24 char.

D. Copy Screen**(1) Copy Operating Screen**

Functions	<ul style="list-style-type: none"> To set the display on the control panel screen during printing.
Use	<ul style="list-style-type: none"> To display the screen to indicate printing when printing is being carried out. ON : The screen shows that the printing is being carried out. The job can be reserved with "Program Next Job" key. OFF: The screen does not indicate the printing being carried out. The normal Copy setting screen will be displayed. The copy reservation is available.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. ON "OFF"

E. Fax Active Screen**(1) TX Display**

Functions	<ul style="list-style-type: none"> To set the screen display for the control panel when transmitting Fax.
Use	<ul style="list-style-type: none"> To display "Sending" on the screen when transmitting Fax.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. ON "OFF"

(2) RX Display

Functions	• To set the screen display on the control panel when receiving Fax.	
Use	• To display "Receiving" on the screen when receiving the Fax.	
Setting/ Procedure	• The default setting is OFF. ON "OFF"	

8.5.3 Initial Setting

Functions	<ul style="list-style-type: none">• To register the default setting for the Copy mode function, the Scanner mode function, and the Fax mode function.* The machine is initialized at the following timings:<ul style="list-style-type: none">• The main power switch is turned ON.• Panel is reset.• In an Interrupt mode.• Auto Clear.• The password entry screen for account Track is changed.• Application is changed.
Use	• To change the Initial mode setting to meet the user's need.
Setting/ Procedure	<p><Current Setting></p> <ul style="list-style-type: none">• To register the Copy mode, scanner mode, or Fax mode set on the panel.• Carry out this setting after the necessary setting for each mode. <p><Factory Default></p> <ul style="list-style-type: none">• Mode set prior to the shipping.• The corresponding setting will be the one which has been set prior to the shipping by carrying out this setting from each mode screen.

8.5.4 Copier Setting

A. Auto Paper Select for Small Original

Functions	• To make the copy setting when the paper is undetectably small, or no original is being set.	
Use	<ul style="list-style-type: none">• To copy the original such as business cards with which the Original detection is not effective.<ul style="list-style-type: none">Copy on Small Size : Copies on A5 paper.Copy on A4/Letter : Copies on A4 or Letter size paper.Prohibit Copy : Does not copy since the original size cannot be detected. Paper Take-up Tray needs to be selected prior to pressing the Start key.	
Setting/ Procedure	• The default setting is Prohibit Copy. Copy on Small Size Copy on A4/Letter "Prohibit Copy"	

B. Auto Booklet ON when Fold & Staple

Functions	• To set whether to set the Auto Booklet when Fold & Staple is selected.
Use	• To cancel setting the Auto Booklet when Fold & Staple is selected.
Setting/ Procedure	• The default setting is Auto Select Booklet. "Auto Select Booklet" OFF

C. Auto Zoom for Combine/Booklet

Functions	• To set whether to select the appropriate magnification when Combine or Booklet is selected during Auto Paper Select.
Use	• To cancel selecting the appropriate magnification when Combine or Booklet is selected during Auto Paper Select.
Setting/ Procedure	• The default setting is Auto Display Zoom Ratio. "Auto Display Zoom Ratio" OFF

D. Sort/Group Auto Change

Functions	• To set whether to automatically switch Sort/Group according to the number of originals and the copies.
Use	• To cancel the function to automatically sort two originals or more when they are set to ADF.
Setting/ Procedure	• The default setting is ON. "ON" OFF

E. Auto Magnification Selection (Platen)

Functions	• To set whether to automatically set the magnification or not when the original is detected to be set on the original glass while the Paper Take-up Tray is selected (except Auto Paper Select).
Use	• To automatically set the Auto Magnification when Paper Take-up Tray is selected.
Setting/ Procedure	• The default setting is OFF. ON "OFF"

F. Auto Magnification Selection (ADF)

Functions	• To set whether to automatically set the Auto magnification when the original is detected to be set to ADF while Paper Take-up Tray is selected (except Auto Paper Select).
Use	• To automatically set the Auto magnification while the Paper Take-up Tray is selected.
Setting/ Procedure	• The default setting is ON. "ON" OFF

G. Specify Default Tray when APS Off

Functions	• To set the Tray to be used when APS is cancelled.
Use	• To set the Tray for the initial setting when APS is cancelled.
Setting/ Procedure	• The default setting is Tray Before APS ON. "Tray Before APS ON" Default Tray

H. Select Tray for Insert Sheet

Functions	• To select the default setting of the Tray for Cover sheet paper.
Use	
Setting/ Procedure	• The default setting is Tray 2.

I. Print Jobs During Copy Operation

Functions	• To set whether to accept the printing job for Print data or Fax data during copy operation.
Use	• To refuse Print data or Fax data during copy operation. Accept : Receives the Print data or Fax data to print. Receive Only : Print data or Fax data will be printed when the copy operation is finished.
Setting/ Procedure	• The default setting is Accept. "Accept" Receive Only

8.5.5 Scanner Setting**A. JPEG Compression Level**

Functions	• To set the JPEG Compression method when scanning with JPEG while in Scanner mode.
Use	• To change the compression rate when JPEG scanning. High Quality : Lowers the compression rate and puts priority in quality while scanning. Standard : Compression rate and quality are normally balanced while scanning. High Compression: Makes the compression rate higher and puts priority in lowering the data volume while scanning.
Setting/ Procedure	• The default setting is Standard. High Quality "Standard" High Compression

B. Black Compression Level

Functions	• To set the monochrome compression method for scanning in the monochrome mode while in Scanner mode.
Use	• To be used when changing the monochrome mode while in Scanner mode.
Setting/ Procedure	• The default setting is MMR. MH "MMR"

C. TWAIN Lock Time

Functions	• To set the period of time for unlocking the operation panel while in TWAIN scanning.
Use	
Setting/ Procedure	• The default setting is 120 sec. 120 sec. (30 to 300)

8.5.6 Printer Setting

A. Basic Setting

(1) PDL Setting

Functions	• To set the PDL (Page Description Language) for PC printing.
Use	• To fix the PDL as necessary. It usually switches automatically.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Auto. <div> "Auto" PCL PS </div>

(2) Number of Sets

Functions	• To set the number to be copied when not specified by the printer driver during PC printing.
Use	• To use when the number cannot be specified by the printer driver during printing from Windows DOS, etc.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is 1. <div> "1" (1 to 999) </div>

(3) Original Direction

Functions	• To set the default setting for the direction of the original during PC printing.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Portrait. <div> "Portrait" Landscape </div>

(4) Spool Print Jobs in HDD before RIP

Functions	• To set whether to store the print data to HDD when receiving the next job during Rip process of the current job.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. <div> ON "OFF" </div>

(5) A4/A3 ↔ LTR/LGR Auto Switch

Functions	• To set whether to switch between A4 and Letter size paper, and A3 and Ledger size paper in reading.
Use	<ul style="list-style-type: none"> To output Letter size document to A4 size, and Ledger size document to A3 size. To output A4 size document to Letter size, and A3 size document to Ledger size. <p>NOTE</p> <ul style="list-style-type: none"> When switching the size, the image will be printed in the same magnification. The image will not be reduced when there is image deficiency.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. <div> ON "OFF" </div>

B. Paper Setting

(1) Paper Tray

Functions	<ul style="list-style-type: none"> • To set the Paper Take-up Tray when not specified by the printer driver during PC printing.
Use	<ul style="list-style-type: none"> • To use when Paper Take-up Tray cannot be specified by the printer driver when printing from Windows DOS, etc.
Setting/ Procedure	<ul style="list-style-type: none"> • The default setting is Auto.

(2) Default Paper Size

Functions	• To set the paper size when not specified by the printer driver during printing.
Use	• To use when the paper size cannot be specified by the printer driver during printing from Windows DOS, etc.

(3) 2-Sided Print

Functions	<ul style="list-style-type: none"> To set whether to carry out duplex print during PC printing when not specified by the printer driver.
Use	<ul style="list-style-type: none"> To use when 2-sided printing cannot be specified by the printer driver while printing by Windows DOS, etc.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> ON “OFF” </div>

(4) Bind Direction

Functions	<ul style="list-style-type: none"> To set the binding direction during duplex printing when not specified by the printer driver during PC printing.
Use	<ul style="list-style-type: none"> To use when binding direction cannot be specified by the printer driver during printing by Windows DOS, etc.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Left Bind. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> Top Bind "Left Bind" Right Bind </div>

(5) Staple

Functions	<ul style="list-style-type: none"> To set whether to staple or not when not specified by the printer driver during PC printing.
Use	<ul style="list-style-type: none"> To use hen staple is not specified by the printer driver during printing by the Windows DOS, etc.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> 1 Position 2 Positions "OFF" </div>

(6) Hole-Punch

Functions	<ul style="list-style-type: none"> To select whether to make punch-holes or not when not specified by the printer driver during PC printing.
Use	<ul style="list-style-type: none"> To use when the printer driver cannot specify punching during printing from Windows DOS, etc.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> ON "OFF" </div>

C. PCL Setting**(1) Typeface**

Functions	<ul style="list-style-type: none"> To set the font when not specified by the printer driver during PC printing.
Use	<ul style="list-style-type: none"> To use when the printer driver cannot specify the font during printing from Windows DOS, etc.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Courier.

(2) Symbol Set

Functions	<ul style="list-style-type: none"> To set the Font Symbol Set when not specified by the printer driver during PC printing.
Use	<ul style="list-style-type: none"> To use when the Font Symbol Set cannot be specified by the printer driver during printing from Windows DOS, etc.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Roman-8 or PC8, Code Page 437.

(3) Font Size

Functions	<ul style="list-style-type: none"> To set the font size when not specified by the printer driver during PC printing.
Use	<ul style="list-style-type: none"> To set the font size when it cannot be specified by the printer driver during printing from Windows DOS, etc.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Scalable Font : 12.00 points Bitmap Font : 10.00 points

(4) Line/Page

Functions	<ul style="list-style-type: none"> To set the number of lines per page for printing the text data.
Use	<ul style="list-style-type: none"> To change the number of lines per page for printing the text data.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is 60 or 64 lines. <div style="text-align: right; margin-top: 10px;">"60 or 64 lines" (5 to 128)</div>

(5) CR/LF Mapping

Functions	<ul style="list-style-type: none"> To set the mode for replacing data when printing the text data.
Use	<ul style="list-style-type: none"> To change the mode for replacing data when printing the text data. <ul style="list-style-type: none"> Mode 1 : Replacing CR with CR-LF Mode 2 : Replacing LF with CR-LF Mode 3 : Replacing with CR-LF OFF : Does not replace
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. <div> <div>Mode 1</div> <div>Mode 2</div> <div>Mode 3</div> <div>"OFF"</div> </div>

D. PS Setting**(1) PS Error Print**

Functions	<ul style="list-style-type: none"> To set whether to print or not the error information when an error occurred during PS rasterizing.
Use	<ul style="list-style-type: none"> To print the information concerning the PostScript error.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. <div> <div>ON</div> <div>"OFF"</div> </div>

E. Print Reports

Functions	<ul style="list-style-type: none"> To output the report or Demo Page concerning the print setting.
Use	<ul style="list-style-type: none"> To check the setting concerning the printer. The types of report available for output are as follows. <ul style="list-style-type: none"> Configuration Page : The list of printer setting will be output. Demo Page : The test page will be output. PCL Font List : PCL Font List will be output. PS Font List : PS Font List will be output.
Setting/ Procedure	<ol style="list-style-type: none"> 1. Touch "User Setting" → "Printer Setting" → "Print Reports" key. 2. Select the report to be output. 3. Select the Paper Take-up Tray and press the Start key.

8.6 Administrator Setting

- The Administrator setting will be available by entering the administrator password (8 digits) set by the administrator setting.
(The administrator password is initially set to "12345678.")

8.6.1 System Setting

A. Power Save

(1) Low Power Mode Setting

Functions	<ul style="list-style-type: none"> To set the time until Low Power starts operating after the last key operation has been completed. Low Power: To turn LED and LCD OFF, and lower the power consumption.
Use	<ul style="list-style-type: none"> To change the time until Low Power starts.
Setting/ Procedure	<ul style="list-style-type: none"> Use the 10-Key Pad for setting. The default setting is 15 min. <p style="text-align: right;">"15 min." (10 to 240)</p>

(2) Sleep Mode Setting

Functions	<ul style="list-style-type: none"> To set the time until Sleep Mode starts operating after the last key operation has been completed. Turn all lines OFF except 5 V line for Control. "OFF" will only be displayed when "No Sleep" in Service Mode is set.
Use	<ul style="list-style-type: none"> To change the time until the Sleep Mode starts.
Setting/ Procedure	<ul style="list-style-type: none"> Use the 10-Key Pad for setting. The default setting is 30 min. <p style="text-align: right;">"30 min." (15 to 240) / OFF</p>

(3) Power Save Key

Functions	<ul style="list-style-type: none"> To set the type of the Power Save Mode which starts by pressing the Power Save Key.
Use	<ul style="list-style-type: none"> To change the Power Save function which starts by pressing the Power Save key.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Low Power. <p style="text-align: center;">"Low Power" Sleep</p>

(4) Entering Power Save Mode (Fax)

Functions	<ul style="list-style-type: none"> To set whether to immediately switch to the Power Save Mode after printing in case of receiving the Fax during Power Save Mode.
Use	<ul style="list-style-type: none"> To immediately switch to the Power Save Mode after printing in case of receiving the Fax during Power Save Mode. <ul style="list-style-type: none"> Normal : Switches to the Power Save Mode according to the normal Power Save Mode after the printing. Immediately : Switches to the Power Save Mode immediately after the printing.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Normal. <p style="text-align: center;">"Normal" Immediately</p>

B. Output Setting**(1) Print/Fax Output Settings**

Functions	<ul style="list-style-type: none"> To set the timing for printing for the PC print job or Fax received.
Use	Batch Print : Starts printing when all data are received Page Print : Starts printing every time data for each page are received
Setting/ Procedure	<Printer> <ul style="list-style-type: none"> The default setting is Page Print. <Fax> <ul style="list-style-type: none"> The default setting is Batch Print.

(2) Exit Tray Setting

Functions	<ul style="list-style-type: none"> To set the priority output tray for each application (Copy print, Printer, Fax and Print Reports). * This setting is available only when FS-507 is mounted.
Use	<ul style="list-style-type: none"> To change the output tray according to the application.
Setting/ Procedure	<ul style="list-style-type: none"> The default settings are as follows. Copy : 2 Print : 2 Fax : 3 Reports : 3

C. Date/Time Setting

Functions	<ul style="list-style-type: none"> To set the date/time and the time zone to start the clock.
Use	<ul style="list-style-type: none"> To change settings concerning the date/time. This setting should be carried out for set up.
Setting/ Procedure	<ul style="list-style-type: none"> For time zone, set the time difference with the world standard time. Setting range for the time zone: -12:00 to +12:00 (by 30 minutes)

D. Daylight Saving Time Setting

Functions	<ul style="list-style-type: none"> To set whether to set the daylight saving time. To set the time difference in setting the daylight saving time.
Use	<ul style="list-style-type: none"> To set the daylight saving time.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> ON “OFF” </div> <ul style="list-style-type: none"> When setting to ON, set the time difference to move up. “60 min.” (1 to 150)

E. Weekly Timer Setting**(1) Weekly Timer ON/OFF Setting**

Functions	<ul style="list-style-type: none"> To set whether to use or not to use the Weekly Timer.
Use	<ul style="list-style-type: none"> To set the Weekly Timer.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> ON “OFF” </div>

(2) Time Setting

Functions	<ul style="list-style-type: none"> To set the time to turn ON/OFF the Weekly Timer for each day of the week.
Use	
Setting/ Procedure	<ol style="list-style-type: none"> 1. Touch the key of the day to be set. 2. Using the 10-Key Pad, input the ON time and the OFF time. 3. For canceling the setting, press Clear key.

(3) Date Setting

Functions	<ul style="list-style-type: none"> To select the date or the day of the week for the Weekly Timer to function.
Use	
Setting/ Procedure	<ol style="list-style-type: none"> 1. Select the Year/Month with +/- keys. 2. For setting by the date, touch the appropriate key of the day. 3. For setting by the day of the week, touch the appropriate key of the week by "Daily Setting." 4. Check to make sure that the set key of the day is highlighted, and touch "OK" key.

(4) Select Time for Power Save

Functions	<ul style="list-style-type: none"> To set the time to turn power OFF/ON when the Weekly Timer is set and the power is ON.
Use	<ul style="list-style-type: none"> To turn power OFF for a certain period of time when the Weekly Timer is set.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. <div style="display: flex; justify-content: space-around; margin: 10px 0;"> ON "OFF" </div> <p><Set Time for Power Save></p> <ul style="list-style-type: none"> Using the 10-Key Pad, input the time to turn OFF and to turn back ON again.

(5) Password for Non-Business Hours

Functions	<ul style="list-style-type: none"> To set whether to input the password before using when the Weekly Timer is set.
Use	<ul style="list-style-type: none"> To set the password for turning the power ON temporarily when the Weekly Timer is set.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. <div style="display: flex; justify-content: space-around; margin: 10px 0;"> ON "OFF" </div> <ul style="list-style-type: none"> When setting to ON, enter the password (eight digits).

F. Restrict User Access

(1) Restrict Access to Saved Program Jobs

Functions	<ul style="list-style-type: none"> To set the prohibition for modifying the registered Copy program.
Use	<ul style="list-style-type: none"> To be used when prohibiting the user from changing the Copy program.
Setting/ Procedure	<ol style="list-style-type: none"> 1. Touch the key for the appropriate Copy program. 2. Touch "OK" key.

(2) Delete Saved Program Jobs

Functions	<ul style="list-style-type: none"> To delete the registered Program Job.
Use	<ul style="list-style-type: none"> To delete the registered Program Job.
Setting/ Procedure	<ol style="list-style-type: none"> 1. Touch the appropriate Program Job. 2. Touch "Delete" key. 3. Touch "Yes" key on the Check screen to delete the Program Job.

(3) Restrict Access to Job Settings

<Changing Job Priority>

Functions	<ul style="list-style-type: none"> To set whether to allow or restrict the change on the print priority for the Job.
Use	<ul style="list-style-type: none"> To Restrict the change on the print priority for the Job.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Allow. <div style="display: flex; justify-content: space-around;"> "Allow" Restrict </div>

<Deleting Other User's Jobs>

Functions	<ul style="list-style-type: none"> To set whether to allow or restrict Job delete by other users when the user is authenticated.
Use	<ul style="list-style-type: none"> To allow other users to delete the Job when the user is authenticated.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Restrict. <div style="display: flex; justify-content: space-around;"> Allow "Restrict" </div>

<Registering and Changing Addresses>

Functions	<ul style="list-style-type: none"> To set whether to allow or restrict the change of the registered address.
Use	<ul style="list-style-type: none"> To prohibit the change on the registered address.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Allow. <div style="display: flex; justify-content: space-around;"> "Allow" Restrict </div>

<Changing Zoom Ratio>

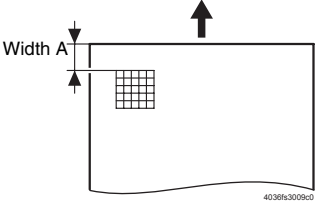
Functions	<ul style="list-style-type: none"> To set whether to allow or restrict the change on the registered magnification.
Use	<ul style="list-style-type: none"> To prohibit the change on registered magnification.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Allow. <div style="display: flex; justify-content: space-around;"> "Allow" Restrict </div>

G. Expert Adjustment**(1) AE Level Adjustment**

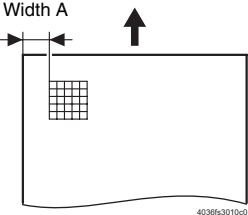
Functions	<ul style="list-style-type: none"> To set the default setting for AE (Auto Exposure) The larger the value becomes the more emphasized the background will be.
Use	To make the background level foggy: Increase the setting value To make the background level less foggy: Decrease the setting value
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is 2. <div style="text-align: right;">"2" (0 to 4)</div>

(2) Printer Adjustment

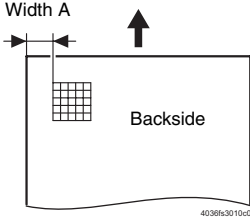
<Leading Edge Adjustment>

Functions	<ul style="list-style-type: none"> To vary the print start position in the sub scan direction for each of different paper types in Tray 1.
Use	<ul style="list-style-type: none"> The LPH Unit has been replaced. The paper type has been changed. The image on the copy deviates in the sub scan direction. A faint image occurs on the leading edge of the image.
Adjustment Specification	<div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <p>Width A on the test pattern produced should fall within the following range.</p> <p>Specifications: 4.0 to 7.0 mm Setting Range: -3.0 mm to +3.0 mm (in 0.2 mm increments)</p> </div> </div>
Adjustment Instructions	<p>If width A is longer than the specifications, make the setting value smaller than the current one.</p> <p>If width A is shorter than the specifications, make the setting value greater than the current one.</p>
Adjustment Procedure	<ol style="list-style-type: none"> 1. Call the Administrator Setting to the screen. 2. Touch "System Setting" → "Expert Adjustment" → "Printer Adjustment" → "Leading Edge Adjustment." 3. Select the "Normal." 4. Press the Start key to let the machine produce a test pattern. 5. Check the dimension of width A on the test pattern. 6. If width A falls outside the specified range, change the setting using the +/- key. 7. Press the Start key to let the machine produce a test pattern. 8. Check the dimension of width A on the test pattern. 9. If width A is outside the specified range, change the setting again and make a check again. 10. If width A falls within the specified range, touch "OK." 11. Following the same procedure, adjust for Thick 1 to 3, OHP, and envelope.

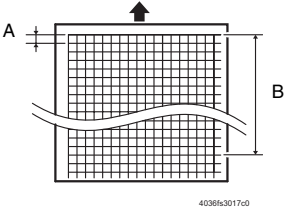
<Centering>

Functions	<ul style="list-style-type: none">To vary the print start position in the main scan direction for each paper source.
Use	<ul style="list-style-type: none">The LPH Unit has been replaced.A paper feed unit has been added.The image on the copy deviates in the main scan direction.
Adjustment Specification	<div><div><div>Width A</div><div></div></div><div><p>Width A on the test pattern produced should fall within the following range.</p><p>Specifications: 3.0 ± 0.5 mm Setting Range: -3.0 mm to +3.0 mm (in 0.2 mm increments)</p></div></div>
Adjustment Instructions	<p>If width A is longer than the specifications, make the setting value smaller than the current one.</p> <p>If width A is shorter than the specifications, make the setting value greater than the current one.</p>
Adjustment Procedure	<ol style="list-style-type: none">1. Call the Administrator Setting to the screen.2. Touch "System Setting" → "Expert Adjustment" → "Printer Adjustment" → "Centeringt."3. Select the paper source to be adjusted.4. Press the Start key to let the machine produce a test pattern.5. Check the dimension of width A on the test pattern.6. If width A falls outside the specified range, change the setting using the +/- key.7. Press the Start key to let the machine produce a test pattern.8. Check the dimension of width A on the test pattern.9. If width A is outside the specified range, change the setting again and make a check again.10.If width A falls within the specified range, touch "END."11.Following the same procedure, adjust for all other paper sources. (Use A4 or 8 1/2 × 11 plain paper for the Bypass.)

<Centering (Duplex 2nd Side)>

Functions	<ul style="list-style-type: none"> To vary the print start position in the main scan direction for each paper source in the 2-Sided mode.
Use	<ul style="list-style-type: none"> The image on the backside of the 2-sided copy deviates in the main scan direction.
Adjustment Specification	<div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <ul style="list-style-type: none"> Width A on the test pattern produced should fall within the following range. For measurement, use the image produced on the backside of the test pattern. <p>Specifications: 3.0 ± 0.5 mm Setting Range: -3.0 mm to +3.0 mm (in 0.2 mm increments)</p> </div> </div>
Adjustment Instructions	<ul style="list-style-type: none"> If width A is longer than the specifications, make the setting value smaller than the current one. If width A is shorter than the specifications, make the setting value greater than the current one.
Adjustment Procedure	<ol style="list-style-type: none"> Call the Administrator Setting to the screen. Touch "System Setting" → "Expert Adjustment" → "Printer Adjustment" → "Centering (Duplex 2nd Side)." Select the paper source to be adjusted. Press the Start key to let the machine produce a test pattern. Check the dimension of width A on the test pattern. If width A falls outside the specified range, change the setting using the +/- key. Press the Start key to let the machine produce a test pattern. Check the dimension of width A on the test pattern on the backside of the copy. If width A is outside the specified range, change the setting again and make a check again. If width A falls within the specified range, touch "END." Following the same procedure, adjust for all other paper sources. (Use A4 or 8 1/2 × 11 plain paper for the Manual Bypass Tray.)

<Vertical Adjustment>

Functions	<ul style="list-style-type: none">To synchronize the paper transport speed with the image writing speed.
Use	<ul style="list-style-type: none">The I adjustment becomes necessary.The image on the copy distorts (stretched, shrunk).When the image on the copy is stretched in the sub scan direction.
Adjustment Specification	<div></div> <p>Width A and width B on the test pattern produced should fall within the following ranges. Width A: equivalent to one grid Width B: equivalent to 48 grids</p> <p>Specifications A: 7.9 to 8.3 B: 389.1 to 392.1</p> <p>Setting Range A, B: -10 to +10</p>
Adjustment Instructions	<p>If width A or B is longer than the specifications, make the setting value smaller than the current one.</p> <p>If width A or B is shorter than the specifications, make the setting value greater than the current one.</p>
Adjustment Procedure	<ol style="list-style-type: none">Load Tray 1 with A3 or 11 × 17 plain paper.Call the Service Mode to the screen.Touch these keys in this order: "Test Mode" → "Lattice Pattern."Select "Black," "SINGLE," "FEET," "CD Width:6," "FD Width:6," "Density:255," and "Normal."Press the Start key to let the machine produce a test pattern.Check width A (equivalent to one grid) and width B (equivalent to 48 grids) on the test pattern.Call the Administrator Setting to the screen.Touch "System Setting" → "Expert Adjustment" → "Printer Adjustment" → "Vertical Adjustment."If width of A or B falls outside the specified range, change the setting using the Up/Down keys.Press the Start key to let the machine produce a test pattern.Check width A and width B on the test pattern.If width A or B falls outside the specified range, change the setting value and make a check again.If width A or B falls within the specified range, touch "OK."Following the same procedure, adjust for "Thick 1 to 3," "OHP," and "Envelope." (Check width A only for "OHP" and "Envelope.")

<Erase Leading Edge>

Functions	<ul style="list-style-type: none">To set the leading edge erase amount of the paper.
Use	<ul style="list-style-type: none">To change the width of the area not printed along the leading edge of the paper.
Setting/ Procedure	<ul style="list-style-type: none">The default setting is "4 mm". <div><div>"4 mm"</div><div>5 mm</div><div>7 mm</div></div>

(3) Finisher Adjustment

<Center Staple Position>

Functions	• To adjust the positions of center staple for the Finisher.
Use	• Use when the center staple positions deviate from the correct ones in the copies made using the Staple function.
Adjustment Specification	• Center staple position: The adjustment range is -7.0 mm to +7.0 mm (in 1-mm increments).

<Half-Fold Position>

Functions	• To adjust the positions of folding for the Finisher.
Use	• Use when the center folding positions deviate from the correct ones in the copies made using the Fold function.
Adjustment Specification	• Fold position: The adjustment range is -7.0 mm to +7.0 mm (in 1-mm increments).

(4) Density Adjustment

<Thick Paper Image Density-Yellow, Magenta, Cyan, Black>

Functions	• To fine-adjust density of printed images of each color for thick paper and OHP transparencies.
Use	• To change the density of the printed image for each color with thick paper and OHP transparencies
Adjustment Range	• The fine-adjustment can be made over a range of a total of five steps, two darker levels and two lighter levels around the standard central level.
Adjustment Instructions	Light color: Touch the Darker key. (5 steps) Dark color: Touch the Lighter key. (5 steps)
Adjustment Procedure	1. Call the Administrator Setting to the screen. 2. Touch "System Setting" → "Expert Adjustment" → "Density Adjustment" → "Thick Paper Image Density-Yellow/Magenta/Cyan/Black." 3. Touch the Lighter or Darker key for the desired color to correct the image density.

<Black Image Density>

Functions	• To fine-adjust the density of the printed image for a black copy
Use	• To vary the density of the printed image of a black copy
Adjustment Range	Lighter (2 steps), "Std", Darker (2 steps)
Adjustment Instructions	If the black is light, touch the Darker key. If the black is dark, touch the Lighter key.
Adjustment Procedure	4. Call the Administrator Setting to the screen. 5. Touch "System Setting" → "Expert Adjustment" → "Density Adjustment" → "Black Image Density." 6. Touch the Lighter or Darker key as necessary to correct the image density.

(5) Image Stabilization

<Image Stabilization Only>

Functions	<ul style="list-style-type: none">• The image stabilization sequence is carried out without clearing the historical data of image stabilization control.
Use	<ul style="list-style-type: none">• Use if an image problem persists even after Gradation Adjustment has been executed.• When D Max Density and Background Voltage Margin of Service mode are changed.
Adjustment Procedure	<ol style="list-style-type: none">1. Call the Administrator Setting to the screen.2. Touch "System Setting" → "Expert Adjustment" → "Image Stabilization" → "Image Stabilization Only."3. Press the Start key to start Stabilizer. The Start key turns orange and stays lit up orange during the Stabilizer sequence.4. Stabilizer is completed when the Start key turns green.

<Initialize+Image Stabilization>

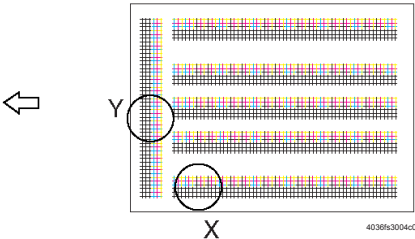
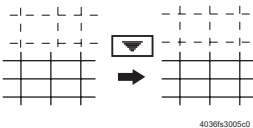
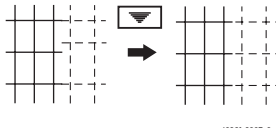
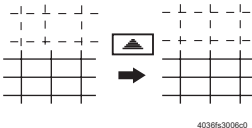
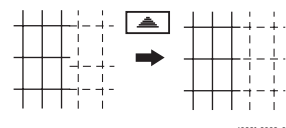
Functions	<ul style="list-style-type: none">• To carry out an image stabilization sequence after the historical data of image stabilization control has been initialized.
Use	<ul style="list-style-type: none">• Use if an image problem persists even after Gradation Adjustment has been executed.• Use if tone reproduction and maximum density are faulty even after Image Stabilization has been executed.
Adjustment Procedure	<ol style="list-style-type: none">1. Call the Administrator Setting to the screen.2. Touch "System Setting" → "Expert Adjustment" → "Image Stabilization" → "Initialize+Image Stabilization."3. Press the Start key to start Stabilizer. The Start key turns orange and stays lit up orange during the Stabilizer sequence.4. Stabilizer is completed when the Start key turns green.

(6) Thin Paper Duplex Mode

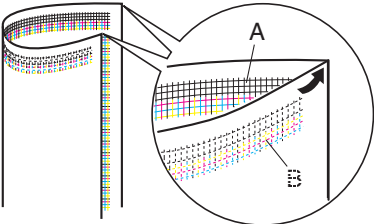
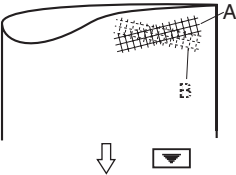
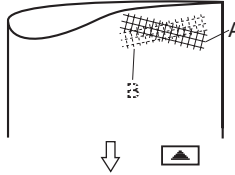
Functions	<ul style="list-style-type: none">• Turn this function ON when thin paper (64 g/m²) is used in an ambience of high temperature and high humidity in the 2-sided mode.• It decreases the transfer output value so as to prevent a paper misfeed from occurring.
Use	<ul style="list-style-type: none">• Use when a paper misfeed occurs when thin paper is used.
Setting/ Procedure	<ul style="list-style-type: none">• The default setting is OFF. <div>ON"OFF"</div>

(7) Color Registration Adjust

<Color Registration Adjust (Yellow, Magenta, Cyan)>

Functions	<ul style="list-style-type: none">To adjust color shift if there is any when comparing the original with copy of the plain or thick paper.Before making this adjustment, be sure to perform Color Registration Adjust (Black).
Use	<ul style="list-style-type: none">To correct any color shift
Adjustment Range	"0" (-6 to +6 dot)
Adjustment Instructions	If the cross deviates in the direction of C, increase the setting. If the cross deviates in the direction of D, decrease the setting.
Adjustment Procedure	<p>1. Call the Administrator Setting to the screen.</p> <p>2. Touch "System Setting" → "Expert Adjustment" → "Color Registration Adjust."</p> <p>3. Load Tray 1 with A3/11x17 or A4/8 1/2x11 paper (Normal or Thick 1 to 3).</p> <p>4. Press the Start key.</p> <p>5. On the test pattern produced, check for deviation between the black line and the line of each color at positions X and Y.</p> <p>6. Select the paper type.</p> <p>7. Select the color to be adjusted.</p> <p>8. Using the +/- key, change the setting value as necessary. (At this time, only the line of the selected color moves.)</p> <p>9. Produce another test pattern and make sure that there is no deviation.</p> <p>Check Procedure</p> <p>Check point X, Y</p> <div></div> <p>Adjustment for X direction: Check point X</p> <div><p>Direction of C</p></div> <p>Adjustment for Y direction: Check point Y</p> <div><p>Direction of C</p></div> <p>Direction of D</p> <div></div> <p>Direction of D</p> <div></div>

<Color Registration Adjust (Black)>

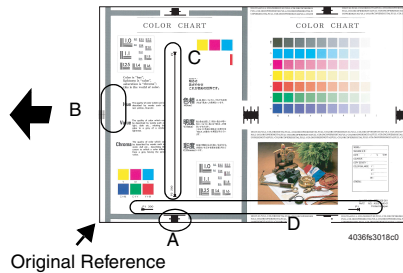
Functions	<ul style="list-style-type: none">To correct black color shift, if it occurs with plain or thick paper.Make Color Registration Adjust (cyan, magenta, and yellow) after this adjustment has been made.
Use	<ul style="list-style-type: none">To correct black color shift, if it occursThe LPH Assy (K) has been replaced.
Adjustment Range	"0" (-10 to +10 dot)
Adjustment Instructions	If the black reference line deviates in the direction of C, decrease the setting value. If the black reference line deviates in the direction of D, increase the setting value.
Adjustment Procedure	<ol style="list-style-type: none">Call the Administrator Setting to the screen.Touch "System Setting" → "Expert Adjustment" → "Color Registration Adjust" → "Color Registration Adjust (Black)."Load Tray 1 with A3 or A4 paper (plain or thick).Press the Start key.Fold the printed test pattern in half lengthwise to check for deviation (the image on the inside).Check deviation between black lines A and B.Select the paper type.Select black.Change the setting value using the +/- key as necessary.Produce another test pattern and check for deviation. <p>Check Procedure</p> <p>Check point A, B</p>  <p>4036fs3001c0</p> <p>If the black reference line deviates in the direction of C, decrease the setting value. If the black reference line deviates in the direction of D, increase the setting value.</p> <p>Direction of C</p>  <p>4036fs3002c0</p> <p>Direction of D</p>  <p>4036fs3003c0</p>

(8) Gradation Adjustment

Functions	<ul style="list-style-type: none"> To make an automatic adjustment of gradation based on the test pattern produced and the readings taken by the Scanner
Use	<ul style="list-style-type: none"> Color reproduction performance becomes poor. The IU has been replaced. The Image Transfer Belt Unit has been replaced. * The Adj. Values of Max. and Highlight shown on the Gradation Adjust screen represent how much corrections are made to produce an ideal image output. Conv. Value shows the difference from the ideal image density. * The closer the Conv. Value to 0, the more ideal the image. Printer (Gradation) : It gives the highest priority to gradation performance of the image as it adjusts. Printer (Resolution) : It gives the highest priority to reproduction performance of letters and lines as it adjusts. Copy : It gives the highest priority to increasing the number of images to be stored in the memory as it adjusts.
Adjustment Specification	<p>Max: 0 ± 100 Highlight: 0 ± 60</p>
Adjustment Procedure	<ol style="list-style-type: none"> 1. Call the Administrator Setting to the screen. 2. Touch "System Setting" → "Expert Adjustment" → "Gradation Adjustment." 3. Select the appropriate mode for the Gradation Adjustment. 4. Press the Start key to let the machine produce a test pattern. 5. Place the test pattern produced on the Original Glass. 6. Place ten blank sheets of A3 paper on the test pattern and lower the Original Cover. 7. Press the Start key. (The machine will then start scanning the test pattern.) 8. Touch "OK" and repeat steps from 2 through 6 twice (a total of three times). 9. Touch "Gradation Adjust" to display the Adj. Values and Conv. Values of each color (C, M, Y and K) for Max and Highlight. 10. Use the following procedures to check the Conv. Value. <p>Max: 0 ± 100 and Highlight: 0 ± 60: It completes the adjustment procedure. If neither Max nor Highlight falls outside the ranges specified above: Perform steps from 2 to 6.</p> <ul style="list-style-type: none"> If a fault is detected, "0" is displayed for all values. In this case, turn OFF and ON the Main Power Switch and perform Gradation Adjust once again. If either Max or Highlight still remains outside the specified ranges perform D Max Density. If a total of four sequences of Gradation Adjust do not bring the values into the specified range, check the image. If the image is faulty, perform the troubleshooting procedures for image problems.

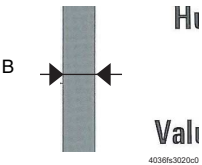
(9) Scanner Adjustment

- Use the following Color Chart for the adjustment of the Scanner Section.
- If the Color Chart is not available, a scale may be used instead.

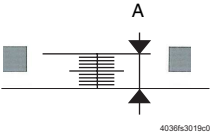


- A: Centering
- B: Leading Edge Adjustment
- C: Horizontal Adjustment
- D: Vertical Adjustment

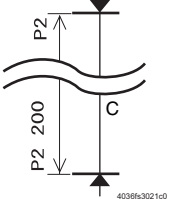
<Leading Edge Adjustment>

Functions	• To adjust variations in mounting accuracy and sensitivity of the Scanner Home Sensor and in mounting accuracy of the Original Width Scale by varying the scan start position in the main scan direction.	
Use	When the Original Glass is replaced. When the Original Width Scale is replaced.	
Adjustment Specification		<ul style="list-style-type: none">• Adjust so that width B on the sample copy made falls within the specified range.• An adjustment must have been completed correctly of “Leading Edge Adjustment” of the Printer Adjustment. <p>Specifications B: 7 ± 0.5 mm (10 ± 0.5 mm if a scale is used)</p> <p>Setting Range -5.0 to +5.0 (in 0.1 mm increments)</p>
Adjustment Instructions	If width B on the copy is less than 6.5 mm, increase the setting value. If width B on the copy is more than 7.5 mm, decrease the setting value.	
Adjustment Procedure	<ol style="list-style-type: none">1. Call the Administrator Setting to the screen.2. Touch “System Setting” → “Expert Adjustment” → “Scanner Adjustment” → “Leading Edge Adjustment.”3. Position the Color Chart correctly so that the original reference point is aligned with the scale.4. Press the Start key to make a copy.5. Check point B on the image of the copy.6. If the image falls outside the specified range, change the setting using the +/- key.7. Press the Start key to make another copy.8. Check the image on the copy to see if the specifications are met.9. Make adjustments until the specifications are met.	

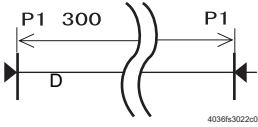
<Centering>

Functions	<ul style="list-style-type: none"> To adjust part-to-part variations in accuracy of IR parts and their mounting accuracy by varying the scan start position in the main scan direction.
Use	<ul style="list-style-type: none"> When the CCD Unit is replaced. When the Original Glass is replaced. The Scanner Home Sensor has been replaced.
Adjustment Specification	<div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <ul style="list-style-type: none"> Adjust so that width A on the sample copy made falls within the specified range. An adjustment must have been completed correctly of "Leading Edge Adjustment" of the Printer Adjustment. <p>Specifications A: 10 ± 1.0 mm</p> <p>Setting Range -10.0 to +10.0 (in 0.1 mm increments)</p> </div> </div>
Adjustment Instructions	<p>If the 0-mm position on the sample copy is on the right side of the correct 0-mm position perpendicularly to the feeding direction (less than -1 mm), decrease the setting.</p> <p>If the 0-mm position on the sample copy is on the left side of the correct 0-mm position perpendicularly to the feeding direction (exceeding 1 mm), increase the setting.</p>
Adjustment Procedure	<ol style="list-style-type: none"> Call the Administrator Setting to the screen. Touch "System Setting" → "Expert Adjustment" → "Scanner Adjustment" → "Centering." Position the Color Chart correctly so that the original reference point is aligned with the scale. Press the Start key to make a copy. Check point A on the image of the copy. If the image falls outside the specified range, change the setting using the +/- key. Press the Start key to make a copy. Check point A of the image on the copy to see if the specifications are met. Make adjustments until the specifications are met.

<Horizontal Adjustment>


Functions	<ul style="list-style-type: none">To adjust the zoom ratio in the main scan direction for the Scanner Section
Use	<ul style="list-style-type: none">The CCD Unit has been replaced.
Adjustment Specification	<div></div> <ul style="list-style-type: none">•Measure C width on the color chart and on the sample copy, and adjust the gap to be within the following specification.•An adjustment must have been completed correctly of "Vertical Adjustment" of the Printer Adjustment. <p>Specifications C: ± 1.0 mm</p> <p>Setting Range 0.990 to 1.010 (in 0.001 increments)</p>
Adjustment Instructions	If the C width on the copy sample is less than one on color chart, increase the setting. If the C width on the copy sample exceeds one on color chart, decrease the setting.
Adjustment Procedure	<ol style="list-style-type: none">1. Call the Administrator Setting to the screen.2. Touch "System Setting" → "Expert Adjustment" → "Scanner Adjustment" → "Horizontal Adjustment."3. Position the Color Chart correctly so that the original reference point is aligned with the scale.4. Press the Start key to make a copy.5. Check the C width on the image of the copy.6. If the image falls outside the specified range, change the setting using the +/- key.7. Press the Start key to make another copy.8. Check the image on the copy to see if the specifications are met.9. Make adjustments until the specifications are met.

<Vertical Adjustment>


Functions	<ul style="list-style-type: none"> To adjust the zoom ratio in the sub scan direction for the Scanner Section
Use	<ul style="list-style-type: none"> The Scanner Assy has been replaced. The Scanner Motor has been replaced. The Scanner Drive Cables have been replaced.
Adjustment Specification	<div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <ul style="list-style-type: none"> Measure D width on the color chart and on the sample copy, and adjust the gap to be within the following specification. An adjustment must have been completed correctly of "Vertical Adjustment" of the Printer Adjustment. <p>Specifications D: ± 1.5 mm</p> <p>Setting Range 0.990 to 1.010 (in 0.001 increments)</p> </div> </div>
Adjustment Instructions	<p>If the D width on the copy sample is less than one on color chart, increase the setting. If the D width on the copy sample exceeds one on color chart, decrease the setting.</p>
Adjustment Procedure	<ol style="list-style-type: none"> Call the Administrator Setting to the screen. Touch "System Setting" → "Expert Adjustment" → "Scanner Adjustment" → "Vertical Adjustment." Position the Color Chart correctly so that the original reference point is aligned with the scale. Press the Start key to make a copy. Check the D width on the image of the copy. If the image falls outside the specified range, change the setting using the +/- key. Press the Start key to make another copy. Check the image on the copy to see if the specifications are met. Make adjustments until the specifications are met.

(10) ADF Adjustment


<Centering>

Functions	<ul style="list-style-type: none"> To make a manual adjustment of the document centering position in each of the ADF modes.
Use	<ul style="list-style-type: none"> When "Auto Adj. of Stop Position" is NG.
Setting/ Procedure	 See Automatic Document Feeder Service Manual.


<Original Stop Position>

Functions	<ul style="list-style-type: none"> To make a manual adjustment of the document stop position and scanning position in each of the ADF modes.
Use	<ul style="list-style-type: none"> When "Auto Adjust Stop Position" is NG.
Setting/ Procedure	 See Automatic Document Feeder Service Manual.


<Centering Auto Adjustment>

Functions	• Adjust the start position for image scanning
Use	• Upon setup of the ADF
Setting/ Procedure	 See Automatic Document Feeder Service Manual.

<Auto Adj. of Stop Position: Front>

Functions	• Adjust the document stop position for the first side. • Check for skew.
Use	• Upon setup of the ADF
Setting/ Procedure	 See Automatic Document Feeder Service Manual.

<Auto Adj. of Stop Position: Back>

Functions	• Adjust the document stop position for the second side.
Use	• Upon setup of the ADF
Setting/ Procedure	 See Automatic Document Feeder Service Manual.

H. List/Counter**(1) Management List**

Functions	• To output the value set by the setting menu.
Use	
Setting/ Procedure	1. Touch "Job Settings List" key. 2. Select the Paper Take-up tray and press the Start key.

(2) Paper Size/Type Count

Functions	• To register the combination of the specific paper size and the paper type, and to set the count.
Use	
Setting/ Procedure	1. Press a key out of 1 to 10 registration keys. 2. Select the paper type. 3. Touch the paper size key to select the paper size.

I. Standard Size Setting**(1) Original Glass Original Size Detect**

Functions	• To change the document size detection table.
Use	• Use to change the setting for the document size detection table.
Setting/ Procedure	• The default setting is "Table1." "Table1" Table2

(2) Foolscap Size Setting

Functions	• To set the size for Foolscap paper.
Use	• Upon setup. • To change the size for Foolscap paper.
Setting/ Procedure	• Select the size from among the following four. <div style="display: flex; justify-content: space-around; margin-top: 5px;"> 220 x 330 mm 8 1/2 x 13 8 1/4 x 13 8 1/8 x 13 1/4 8 x 13 </div>

8.6.2 Administrator/Machine Setting

A. Administrator Registration

Functions	• To register the information on Administrator and the From address for e-mail transmission.
Use	
Setting/ Procedure	1. Touch "Name" key, "E-Mail Address" key to input them. 2. Using the 10-Key Pad, enter the Extension No.

B. Input Machine Address

Functions	• To register the name of the Machine and E-mail address.
Use	• The registered address will be used to receive e-mail in the box in the machine. It can also be used as one of the From addresses for the scanner job.
Setting/ Procedure	1. Touch "Machine Name" key and input the name. 2. Touch "E-mail" key, and input the address.

8.6.3 One-Touch Registration

A. Scan

(1) Address Book

<E-Mail>

Functions	• To register/change the e-mail address for transmitting the scanned data by e-mail.
Use	
Setting/ Procedure	• Touch "New" key to register the new address. • Select any displayed address to check, change, or delete the setting.

<FTP>

Functions	• To register and change the FTP address for transmitting the scanned data by FTP.
Use	
Setting/ Procedure	• Touch "New" key to register the new address. • Select any displayed address to check, change, or delete the setting.

<SMB>

Functions	• To register or change the SMB address for transmitting the scanned data by SMB.
Use	
Setting/ Procedure	• Touch "New" key to register the new address. • Select any displayed address to check, change, or delete the setting.

<User Box>

Functions	<ul style="list-style-type: none"> To register or change the Box address for storing the scanned data to the Box in the hard disk of the Machine.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> Touch "New" key to register the new address. Select any displayed address to check, change, or delete the setting.

(2) Group

Functions	<ul style="list-style-type: none"> To register or change the group with a number of addresses to transmit data simultaneously.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> Touch "New" key to register the new group. Select any displayed group to check, change, or delete the setting. At least one address must be registered in order to register the group.

(3) Program

Functions	<ul style="list-style-type: none"> To register or change the Scan Program.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> Select any program No. to register, and to check, change or delete the setting.

(4) Subject/Text (for E-mail)

<Subject>

Functions	<ul style="list-style-type: none"> To register the e-mail subject for transmitting the scanned data by e-mail.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> Touch "New" key to register the new subject. Select any displayed subject to check, change, or delete the setting.

<Text>

Functions	<ul style="list-style-type: none"> To register the e-mail message for transmitting the scanned data by e-mail.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> Touch "New" key to register the new message. Select any displayed message to check, change, or delete the setting.

B. Fax

- Settings are available only when the Optional FAX kit (FK-502) is mounted.

(1) Address Book

<Addr. Dial>

Functions	<ul style="list-style-type: none"> To register or change the Fax number for transmitting the Fax.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> Touch "New" key to register the new address. Select any displayed address to check, change, or delete the setting.

<E-Mail>

Functions	<ul style="list-style-type: none"> To register or change the e-mail address for transmitting the Fax original by e-mail.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> Touch "New" key to register the new address. Select any displayed address to check, change, or delete the setting.

<User Box>

Functions	<ul style="list-style-type: none"> To register or change the Box address in the hard disk of the machine when storing the Fax data in the Box.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> Touch "New" key to register the new address. Select any displayed address to check, change, or delete the setting.

(2) Group

Functions	<ul style="list-style-type: none"> To register or change the group with a number of addresses to transmit the Fax data simultaneously.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> Touch "New" key to register the new address. Select any displayed group to check, change, or delete the setting. At least one address of the group must be registered in order to register the group.

(3) Program

Functions	<ul style="list-style-type: none"> To register or change the Fax Program.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> Select any Program No, to register, and to check, change, or delete the setting.

(4) Subject/Text (for E-mail)

<Subject>

Functions	<ul style="list-style-type: none"> To register the e-mail Subject for transmitting the Fax original by e-mail.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> Touch "New" key to register the new subject. Select any displayed subject to check, change, or delete the setting.

<Text>

Functions	<ul style="list-style-type: none"> To register the e-mail message for transmitting the Fax original by e-mail.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> Touch "New" key to register the new message. Select any displayed message to check, change, or delete the setting.

C. User Box**(1) Public/Personal User Box**

Functions	<ul style="list-style-type: none"> To register or change the Box for storing the text data in the hard disk of the machine.
Use	<ul style="list-style-type: none"> To register the shared or personal box for any purpose.
Setting/ Procedure	<ul style="list-style-type: none"> Touch "New" key to register the new box. Select any displayed box to change or delete it.

(2) Bulletin Board User Box

Functions	<ul style="list-style-type: none"> To register or change the Bulletin Board User Box.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> Touch "New" key to register the new box. Select any displayed box to change or delete it.

D. One-Touch Registration List**(1) Address Book List**

Functions	<ul style="list-style-type: none"> To output the Address Book List.
Use	<ul style="list-style-type: none"> To print the list of abbreviated addresses which are registered.
Setting/ Procedure	<ol style="list-style-type: none"> Select the Destination Type to be output. Specify the Registration No. range to be output. Touch "Print" key, and select the Paper Take-up Tray. Press the Start key to output the list of abbreviated addresses.

(2) Group List

Functions	<ul style="list-style-type: none"> To output the Group List.
Use	<ul style="list-style-type: none"> To print out the list of addresses of the group which are registered.
Setting/ Procedure	<ol style="list-style-type: none"> Specify the Registration No. range to be output. Touch "Print" key, and select the Paper Take-up Tray. Press the Start key to output the list of the addresses of the group.

(3) Program List

Functions	<ul style="list-style-type: none"> To output the Program List.
Use	<ul style="list-style-type: none"> To print out the list of the Program addresses which are registered.
Setting/ Procedure	<ol style="list-style-type: none"> Select the Destination Type to be output. Specify the Registration No. range to be output. Touch "Print" key, and select the Paper Take-up Tray. Press the Start key, and output the list of Program.

(4) E-Mail Subject/Text List

Functions	<ul style="list-style-type: none"> To output the Subject or the Text list.
Use	<ul style="list-style-type: none"> To print out the E-mail Subject/Text List which are registered.
Setting/ Procedure	<ol style="list-style-type: none"> Select the Paper Take-up Tray. Press the Start key to output the Subject/Text List.

8.6.4 User Authentication/Account Track

A. General Settings

(1) User Authentication

Functions	<ul style="list-style-type: none"> To set the User Authentication method.
Use	<ul style="list-style-type: none"> To select whether to authenticate the user by the External Server or MFP.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. <div> <div>"OFF"</div> <div>ON (External Server)</div> <div>ON (MFP)</div> </div>

(2) Public User Access

Functions	<ul style="list-style-type: none"> To set whether to allow or prohibit the nonregistered user to use the system when User authentication has been set.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Restrict. <div> <div>"Restrict"</div> <div>Allow</div> </div> <p>NOTE</p> <ul style="list-style-type: none"> This setting is not available without User Authentication.

(3) Account Track

Functions	<ul style="list-style-type: none"> To set whether to enable the Account Track function or not.
Use	<ul style="list-style-type: none"> To enable the Account Track function.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. <div> <div>"OFF"</div> <div>ON</div> </div>

(4) Account Track Input Method

Functions	<ul style="list-style-type: none"> To set the Authentication method for the Account Track.
Use	<ul style="list-style-type: none"> To select whether to authenticate by password or by account name & password.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Account Name & Password. <div> <div>"Account Name & Password"</div> <div>Password Only</div> </div> <p>NOTE</p> <ul style="list-style-type: none"> This setting is not available without the Account Track.

(5) When # of Jobs Reach Maximum

Functions	<ul style="list-style-type: none"> To set whether to stop the currently printing job and start the next job, or to stop the machine, when reaching to the upper limit for the number of printed pages set by the User Authentication and the Account Track.
Use	<ul style="list-style-type: none"> To stop the machine when the number of printed pages reach the upper limit set by the User authentication and the Account Track.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Skip Job. <div> <div>"Skip Job"</div> <div>Stop Job</div> </div> <p>NOTE</p> <ul style="list-style-type: none"> This setting is available only with User authentication and the Account Track.

(6) Synchronize User Authentication & Account Track

Functions	<ul style="list-style-type: none"> To set whether to synchronize the User Authentication and Account Track.
Use	<ul style="list-style-type: none"> To be used when not to synchronize the User Authentication and Account Track.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Synchronize. <p style="text-align: center;">“Synchronize” Do not synchronize</p> <p>NOTE</p> <ul style="list-style-type: none"> The setting is available only when carrying out the User Authentication and Account Track.

(7) # of Counters Assigned for Users

Functions	<ul style="list-style-type: none"> To set the number available to be assigned for the User registration and Account registration.
Use	<ul style="list-style-type: none"> To change the number available to be assigned for the User registration and Account registration.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is 500. The total number to be registered for the User Authentication and Account Track is 1000. The number for the User registration will be set. When setting the “# of Counters Assigned for Users” to 50, the number available for Account Track will be 950.

B. User Authentication Setting**(1) Administrative Setting**

<User Name List>

Functions	<ul style="list-style-type: none"> To set whether to display or not the list key for User names on User Authentication screen.
Use	<ul style="list-style-type: none"> To display the list key for User names on User Authentication screen
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. <p style="text-align: center;">ON “OFF”</p>

<Default Function Permission>

Functions	<ul style="list-style-type: none"> To set the default value for the Function Permission in User Authentication by the External Server.
Use	<ul style="list-style-type: none"> To set the function which authenticated user can use when initially authenticating the user by the External Server. Items available for setting: Copy operation, Scan operation, Fax operation, and printing, and User Box operation
Setting/ Procedure	<ul style="list-style-type: none"> The default settings are Allow. <p style="text-align: center;">“Allow” Restrict”</p>

(2) User Registration

Functions	<ul style="list-style-type: none"> To register or change the user.
Use	<ul style="list-style-type: none"> To register or change the user for authentication.
Setting/ Procedure	<ol style="list-style-type: none"> Select the user (001 to 1000). Input the User Name, User Password, and E-Mail address. Set the Output Permission, Max Allowance Set, and Function Permission, and touch “OK” key.

(3) User Counter

Functions	<ul style="list-style-type: none"> To display the status of use of the copier, printer, scanner, and Fax for each user.
Use	<ul style="list-style-type: none"> To check the status of use of the copier, printer, scanner, and Fax for each user.
Setting/ Procedure	<ol style="list-style-type: none"> Select the user. Select the key to check to see the status of use. For clearing the counter, touch "Clear Counter" key.

C. Account Track Setting

(1) Account Track Registration

Functions	<ul style="list-style-type: none"> To register and change the Account.
Use	<ul style="list-style-type: none"> To register and change the account for Account Track.
Setting/ Procedure	<ol style="list-style-type: none"> Select the proper Account. (001 to 500). Input the Account Name and the Password. Set the Output Permission, and Max. Allowance Set, and touch "OK" key.

(2) Account Track Counter

Functions	<ul style="list-style-type: none"> To display the status of use of the copier, printer, scanner, and Fax for each account.
Use	<ul style="list-style-type: none"> To check the status of use of the copier, printer, scanner, and Fax for each account.
Setting/ Procedure	<ol style="list-style-type: none"> Select the account. Select the key for the item to be checked. For clearing the counter, touch "Clear Counter" key.

D. Print without Authentication

Functions	<ul style="list-style-type: none"> To set whether to allow or restrict the print which user and account are not specified.
Use	<ul style="list-style-type: none"> To allow or restrict printing which user and account are not specified.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Restrict. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> Allow "Restrict" </div>

E. Counter List

Functions	<ul style="list-style-type: none"> To print out the User counter and the account counter.
Use	<ul style="list-style-type: none"> To output the user counter and account counter to be checked.
Setting/ Procedure	<ol style="list-style-type: none"> Touch "Counter List" key. Select the Paper Take-up Tray. Press the Start key.

8.6.5 Network Setting

A. TCP/IP Setting

(1) TCP/IP Setting

Functions	<ul style="list-style-type: none"> To set whether to enable or disable TCP/IP setting.
Use	<ul style="list-style-type: none"> To disable TCP/IP setting.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is ON. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> "ON" OFF </div> <p>NOTE</p> <ul style="list-style-type: none"> When the setting is changed, turn main power switch OFF and ON again.

(2) IP Address

Functions	• To set the IP address of the device used in the network.
Use	• To enter the IP address of the machine.
Setting/ Procedure	• IP address Version 4 format [0 to 255] . [0 to 255] . [0 to 255] . [0 to 255]

(3) Subnet Mask

Functions	• To set the subnet mask of the device used in the network.
Use	• To enter the subnet mask of the machine.
Setting/ Procedure	• IP address Version 4 format [0 to 255] . [0 to 255] . [0 to 255] . [0 to 255]

(4) Default Gateway

Functions	• To set the gateway address of the device used in the network.
Use	• To enter the gateway address of the machine.
Setting/ Procedure	• IP address Version 4 format [0 to 255] . [0 to 255] . [0 to 255] . [0 to 255]

(5) DHCP Setting

Functions	• To set DHCP for the network.
Use	• To use DHCP.
Setting/ Procedure	• The default setting is ON. "ON" OFF

(6) Priority DNS Server

Functions	• To set the Priority DNS Server.
Use	• To enter Priority DNS Server.
Setting/ Procedure	• IP address Version 4 format [0 to 255] . [0 to 255] . [0 to 255] . [0 to 255]

(7) Substitute 1/2 DNS Server

Functions	• To set the Substitute DNS Server.
Use	• To enter the Substitute DNS Server.
Setting/ Procedure	• IP address Version 4 format [0 to 255] . [0 to 255] . [0 to 255] . [0 to 255]

(8) IP Filtering

Functions	<ul style="list-style-type: none">To set the IP Filtering.
Use	<ul style="list-style-type: none">To set whether to receive IP address within the specified range of the value.
Setting/ Procedure	<p><Permit Access></p> <ol style="list-style-type: none">Select Enable or Disable on "Permit Access."Select range Set 1 to Set 5, and input address using the 10-Key Pad.Touch "OK" key. <p><Deny Access></p> <ol style="list-style-type: none">Touch "Deny Access" key.Select Enable or Disable on "Deny Access."Select range Set 1 to Set 5, and enter address using the 10-Key Pad.Touch "OK" key.

(9) RAW Port No.

Functions	<ul style="list-style-type: none">To set the RAW port No.
Use	<ul style="list-style-type: none">To set the RAW port number for the printer.
Setting/ Procedure	<ol style="list-style-type: none">Select the necessary port number.Select to use or not to use.When using the selected port, press the Clear key to clear the value, and enter the RAW port number using the 10-Key Pad.Touch "OK" key.

(10) DNS Host Name

Functions	<ul style="list-style-type: none">To set the DNS Host name.
Use	<ul style="list-style-type: none">To enter the DNS Host name.
Setting/ Procedure	<ol style="list-style-type: none">Touch "DNS Host Name" key.Enter the DNS Host name on the screen key board, and touch "OK" key.

(11) DNS Domain Name

Functions	<ul style="list-style-type: none">To set the DNS Domain name.
Use	<ul style="list-style-type: none">To enter the DNS Domain name.
Setting/ Procedure	<ol style="list-style-type: none">Touch "DNS Domain Name" key.Enter the DNS Domain name using the keyboard on the screen, and touch "OK" key.

B. NetWare Setting

(1) NetWare Setting

Functions	<ul style="list-style-type: none">To enable or disable the NetWare setting.
Use	<ul style="list-style-type: none">To use NetWare setting.
Setting/ Procedure	<ul style="list-style-type: none">The default setting is OFF. <div>ON"OFF"</div>

(2) Ethernet Frame Type

Functions	• To set the Ethernet Frame Type.
Use	• To specify the Frame type for transmission.
Setting/ Procedure	• The default setting is Auto Detect. "Auto Detect" 802.2 802.3 Ethernet II 802.2SNAP

(3) Operation Mode

Functions	• To set the Operation Mode.
Use	• To change the Operation Mode.
Setting/ Procedure	• The default setting is PServer. "PServer" Nprinter/Rprinter

(4) Status

Functions	• To display NetWare Status.
Use	• To check NetWare status.
Setting/ Procedure	1. Touch "Status" key. 2. Touch UP/Down arrow keys to select the server to check. 3. Check the NetWare status.

(5) Print Server Name/Print Server Password

Functions	• To set the Print server name and Print server password.
Use	• To enter the print server name or the print server password.
Setting/ Procedure	1. Touch "Print Server name" key or "Print Server Password" key. 2. Enter the Print server name or the Print server password (up to 63 characters) using the on-screen keyboard, and touch "OK" key.

(6) Polling Interval

Functions	• To set the Polling interval.
Use	• To set the interval to search the print queue.
Setting/ Procedure	1. Press the Clear key. 2. Enter the Polling interval between 1 and 65535 using the 10-Key Pad.

(7) NDS/Bindery Setting

Functions	• To set whether to enable or disable the Bindery setting when using NetWare4.X model and after.
Use	• To enable the Bindery service.
Setting/ Procedure	• The default setting is NDS. "NDS" NDS&Bindery

(8) File Server Name

Functions	<ul style="list-style-type: none">• To set the File server name.
Use	<ul style="list-style-type: none">• To set the Full server name for the print server to logon.
Setting/ Procedure	<ol style="list-style-type: none">1. Touch "File Server Name" key.2. Enter the File server name (up to 47 characters) on the on-screen keyboard, and touch "OK" key.

(9) NDS Context Name

Functions	<ul style="list-style-type: none">• To set the NDS Context name.
Use	<ul style="list-style-type: none">• To set the NDS Context name.
Setting/ Procedure	<ol style="list-style-type: none">1. Touch "NDS Context name" key.2. Enter the NDS Context name (up to 191 characters) on the on-screen keyboard, and touch "OK" key.

(10) NDS Tree Name

Functions	<ul style="list-style-type: none">• To set the NDS Tree name.
Use	<ul style="list-style-type: none">• To set the NDS Tree name.
Setting/ Procedure	<ol style="list-style-type: none">1. Touch "NDS Tree Name" key.2. Enter the NDS Tree name (up to 63 characters) on the on-screen keyboard, and touch "OK" key.

(11) Printer Name

Functions	<ul style="list-style-type: none">• To set the Printer Name.
Use	<ul style="list-style-type: none">• To set the Printer Name.
Setting/ Procedure	<ol style="list-style-type: none">1. Touch "Printer Name" key.2. Enter the Printer Name (up to 63 characters) on the on-screen keyboard, and touch "OK" key.

(12) Printer Number

Functions	<ul style="list-style-type: none">• To set the Printer number.
Use	<ul style="list-style-type: none">• To set the Printer number.
Setting/ Procedure	<ol style="list-style-type: none">1. Press the Clear key.2. Enter the number between 0 and 254 using the 10-Key Pad.

C. IPP Setting

(1) IPP Setting

Functions	<ul style="list-style-type: none">• To set whether to enable or disable IPP setting.
Use	<ul style="list-style-type: none">• To disable IPP setting.
Setting/ Procedure	<ul style="list-style-type: none">• The default setting is ON. <div><div>“ON”</div><div>OFF</div></div>

(2) Accept IPP job

Functions	• To set whether to allow or restrict the IPP job.
Use	• To restrict the IPP job
Setting/ Procedure	• The default setting is ON. "ON" OFF

(3) Support Operation

Functions	• To set the Operation support information.
Use	• For the response setting to see if IPP transmission supports each function.
Setting/ Procedure	1. Touch "Support Operation" key. 2. Set ON or OFF for each item.

(4) Printer Information

Functions	• To set the Printer information.
Use	• To set the Printer information.
Setting/ Procedure	1. Touch "Printer Information" key. 2. Enter the Printer Name, Printer Location, and Printer Information on the on-screen keyboard. 3. Touch "Print URI" key to check the Printer URI information.

D. FTP Setting**(1) Proxy Server Address**

Functions	• To set the Proxy server address.
Use	• To enter the Proxy server address.
Setting/ Procedure	• IP address Version 4 format [0 to 255] . [0 to 255] . [0 to 255] . [0 to 255] 1. Touch "Host Address" key. 2. Select "IP Address Input" to enter the IP Address. 3. Select "Host Name Input" to enter the Host name.

(2) Proxy Port Number

Functions	• To set the Proxy server port number.
Use	• To enter the Proxy server port number.
Setting/ Procedure	• Press the Clear key. • Enter the Proxy server port number between 1 and 65535 using the 10-Key Pad.

(3) Port No.

Functions	• To set the Port number to be used for transmission with FTP server.
Use	• To enter the Port number to be used for transmission with FTP server.
Setting/ Procedure	1. Touch "Input" key. 2. Press the Clear key. 3. Enter the Proxy Server Port number between 1 and 65535 using the 10-Kay Pad.

(4) Connection Timeout

Functions	• To set the timeout period for connecting to FTP server.
Use	• To change the timeout period for connecting.
Setting/ Procedure	1. Touch "Input" key. 2. Press the Clear key. 3. Enter the connecting timeout period between 5 and 300 using the 10-Key Pad.

(5) FTP Client

Functions	• To set whether to use "Scan to FTP (FTP transmission)" or not.
Use	• Not to use "Scan to FTP (FTP transmission)."
Setting/ Procedure	• The default setting is ON. "ON" OFF

(6) FTP Server

Functions	• To set whether to use FTP server or not.
Use	• Not to use FTP server.
Setting/ Procedure	• The default setting is ON. "ON" OFF

E. SMB Setting

(1) Scan Setting

Functions	• To set whether to use SMB or not in Scan mode (Scan to PC).
Use	• Not to use SMB in Scan mode (Scan to PC).
Setting/ Procedure	• The default setting is ON. "ON" OFF

(2) Print Setting

Functions	• To set whether to use SMB port or not in Printer mode.
Use	• Not to use SMB port in Printer mode.
Setting/ Procedure	• The default setting is ON. "ON" OFF

(3) NetBIOS Name

Functions	• To set NetBIOS name.
Use	• To set NetBIOS name.
Setting/ Procedure	1. Touch "NetBIOS Name" key. 2. Enter the NetBIOS name (up to 15 characters) on the on-screen keyboard, and touch "OK" key.

(4) Print Service Name

Functions	<ul style="list-style-type: none"> To set the Print service name.
Use	<ul style="list-style-type: none"> To set the Print service name.
Setting/ Procedure	<ol style="list-style-type: none"> Touch "Print Service Name" key. Enter the Print Service name (up to 31 characters) on the on-screen keyboard, and touch "OK" key.

(5) Workgroup

Functions	<ul style="list-style-type: none"> To set the Workgroup.
Use	<ul style="list-style-type: none"> To set the Workgroup.
Setting/ Procedure	<ol style="list-style-type: none"> Touch "Workgroup" key. Enter the Workgroup (up to 15 characters) on the on-screen keyboard, and touch "OK" key.

F. AppleTalk Setting**(1) AppleTalk Setting**

Functions	<ul style="list-style-type: none"> To set whether to enable or disable the AppleTalk setting.
Use	<ul style="list-style-type: none"> To use AppleTalk setting.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> ON “OFF” </div>

(2) Printer Name

Functions	<ul style="list-style-type: none"> To set the Printer name displayed on the AppleTalk network.
Use	<ul style="list-style-type: none"> To set the Printer name displayed on the AppleTalk network.
Setting/ Procedure	<ol style="list-style-type: none"> Touch "Printer Name" key. Enter the Printer name (up to 31 characters) on the on-screen keyboard, and touch "OK" key.

(3) Zone Name

Functions	<ul style="list-style-type: none"> To set the Zone name connected with AppleTalk network.
Use	<ul style="list-style-type: none"> To set the Zone name connected with AppleTalk network.
Setting/ Procedure	<ol style="list-style-type: none"> Touch "Zone Name" key. Enter the Zone name (up to 31 characters) on the on-screen keyboard, and touch "OK" key.

(4) Current Zone

Functions	<ul style="list-style-type: none"> To display the current zone on AppleTalk network.
Use	<ul style="list-style-type: none"> To check the current zone on the AppleTalk network.

G. LDAP Setting

(1) Enabling LDAP

<LDAP Function>

Functions	• To set whether to enable or disable the LDAP function.
Use	• To use LDAP function.
Setting/ Procedure	• The default setting is OFF. ON "OFF"

<Max. Search Results>

Functions	• To set the Max. results of address for LDAP search
Use	• To change the Max. results of address for LDAP search
Setting/ Procedure	1. Touch "Max. Search Results" key. 2. Press the Clear key. 3. Enter the Max. Search result numbers between 5 and 1000 using the 10-Key Pad.

<Timeout>

Functions	• To set the Max. timeout period for LDAP search.
Use	• To change the Max. timeout period for LDAP search.
Setting/ Procedure	1. Touch "Timeout" key. 2. Press the Clear key. 3. Enter the timeout period between 5 and 300 using the 10-Key Pad.

<Initial Setting for Search Details>

Functions	• To set the initial items for search conditions in LDAP detail search.
Use	• To set the initial items for search conditions in LDAP detail search.
Setting/ Procedure	1. Touch "Initial Setting for Search Details" key. 2. Touch "Condition" key for each search item, and select the condition.

(2) Setting Up LDAP

<Server Address>

Functions	• To set the LDAP server address.
Use	• To enter LDAP server address.
Setting/ Procedure	• IP Address Version 4 format [0 to 255] . [0 to 255] . [0 to 255] . [0 to 255]

<Search Base>

Functions	• To set the Directory Path for LDAP server.
Use	• To enter the Directory Path for LDAP server.
Setting/ Procedure	1. Touch "Search Base" key. 2. Enter the Search Base (up to 255 characters) on the on-screen keyboard, and touch "OK" key.

<Enable SSL>

Functions	• To set whether to use SSL (data encryption) for connecting to LDAP server.
Use	• To use SSL (data encryption) for connecting to LDAP server.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. <div style="display: flex; justify-content: space-around;"> ON "OFF" </div>

<Port No.>

Functions	• To set the LDAP server port number.
Use	• To enter the LDAP server port number.
Setting/ Procedure	<ol style="list-style-type: none"> Press the Clear key. Enter the port number between 1 and 65535 using the 10-Key Pad.

<General Settings>

Functions	• To set the authentication method to logon to LDAP server.
Use	<ul style="list-style-type: none"> To change the authentication method to logon to LDAP server. <ul style="list-style-type: none"> anonymous : User name and password are not necessary Simple : Simple method which needs the user name and the password Digest-MD5 : Method available with normal LDAP server. When failing to authenticate with Digest-MD5, it automatically switches to CRAM-MD5. GSS-SPNEGO : Method available with Window's Active Directory (Kerberos authentication).
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is anonymous. <div style="display: flex; justify-content: space-around;"> "anonymous" Simple Digest-MD5 GSS-SPNEGO </div>

<Login Name>

Functions	• To set the Logon name to connect to LDAP server.
Use	• To set the logon name to connect to LDAP server.
Setting/ Procedure	<ol style="list-style-type: none"> Touch "Login Name" key. Enter the logon name (up to 255 characters) on the on-screen keyboard, and touch "OK" key. <p>NOTE</p> <ul style="list-style-type: none"> The setting is not available when Authentication method is set to anonymous.

<Password>

Functions	• To set the password for connecting to LDAP server.
Use	• To set the password for connecting to LDAP server.
Setting/ Procedure	<ul style="list-style-type: none"> Touch "Password" key. Enter the password (up to 63 characters) on the on-screen keyboard, and touch "OK" key. <p>NOTE</p> <ul style="list-style-type: none"> The setting is not available when Authentication method is set to anonymous.

<Domain Name>

Functions	• To set the Domain Name for connecting to LDAP server.
Use	• To set the Domain Name for connecting to LDAP server.
Setting/ Procedure	1. Touch "Domain Name" key. 2. Enter the domain name (up to 64 characters) on the on-screen keyboard, and touch "OK" key.

<Dynamic Authentication>

Functions	• To set whether to enable or disable the Dynamic Authentication.
Use	• To enable the Dynamic Authentication.
Setting/ Procedure	• The default setting is Disable. Enable "Disable"

<Reset All Settings>

Functions	• To return the contents registered in the LDAP server to what they were prior to the shipping.
Use	
Setting/ Procedure	1. Touch "Reset All Settings" key. 2. Check the message and touch "Yes."

H. E-Mail Setting

(1) E-Mail TX (SMTP)

<E-Mail TX Setting>

Functions	• To set whether to enable or disable the E-mail transmission setting.
Use	• To disable the E-mail transmission setting.
Setting/ Procedure	• The default setting is ON. "ON" OFF

<SMTP Server Address>

Functions	• To set the SMTP server address.
Use	• To enter the SMTP server address.
Setting/ Procedure	• SMP Server Address Version 4 format [0 to 255] . [0 to 255] . [0 to 255] . [0 to 255] 1. Touch "Host Address" key. 2. Select "IP Address Input", and enter IP Address. 3. Select "Host Name Input", and enter the host name.

<Binary Division>

Functions	• To set whether to carry out Binary division for data to be transmitted
Use	• Not to carry out Binary division for data to be transmitted
Setting/ Procedure	• The default setting is ON. "ON" OFF

<Divided Mail Size>

Functions	<ul style="list-style-type: none"> To set the dividing size when carrying out the Binary division for data to be transmitted.
Use	<ul style="list-style-type: none"> To change the dividing size of the data.
Setting/ Procedure	<ol style="list-style-type: none"> Press the Clear key. Enter the dividing mail size between 100 and 15000 using the 10-Key Pad.

<Connection Timeout>

Functions	<ul style="list-style-type: none"> To set the Timeout period for connection in transmitting e-mail to SMTP server.
Use	<ul style="list-style-type: none"> To change the timeout period for connection in transmitting e-mail to SMTP server.
Setting/ Procedure	<ul style="list-style-type: none"> Select the timeout period using +/- keys.

<Server Capacity>

Functions	<ul style="list-style-type: none"> To set the Max. capacity per mail which SMTP server can receive.
Use	<ul style="list-style-type: none"> To change the Max. capacity per mail which SMTP server can receive.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is No Limit. <p style="text-align: right;">"No Limit" (1 to 100)</p>

<Detail Setting: Port No.>

Functions	<ul style="list-style-type: none"> To set the Port number for transmission with SMTP server.
Use	<ul style="list-style-type: none"> To enter the port number for transmission with SMTP server.
Setting/ Procedure	<ol style="list-style-type: none"> Touch "Input" key. Press the Clear key. Enter the port number between 1 and 65535 using the 10-Key Pad.

<Detail Setting: Authentication Setting>

Functions	<ul style="list-style-type: none"> To set the Authentication method to logon to SMTP server.
Use	<ul style="list-style-type: none"> To change the Authentication method to logon to SMTP server.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. <p style="text-align: center;">"OFF" POP Before SMTP SMTP Authentication</p> <ul style="list-style-type: none"> When selecting SMTP Authentication, enter the User ID, the password, and the Domain name.

<Detail Setting: POP Before SMTP Time>

Functions	<ul style="list-style-type: none"> To set the time necessary for POP Before SMTP Authentication.
Use	<ul style="list-style-type: none"> To change the time necessary for POP Before SMTP Authentication.
Setting/ Procedure	<ol style="list-style-type: none"> Touch "Input" key. Press the Clear key. Enter the time for POP Before SMTP between 0 and 60 using the 10-Key Pad.

(2) E-Mail RX (POP)

<E-Mail RX Setting>

Functions	• To set whether to enable or disable the e-mail reception setting.
Use	• To disable the e-mail reception setting.
Setting/ Procedure	• The default setting is ON. "ON" OFF

<POP Server Address>

Functions	• To set the POP Server Address.
Use	• To enter the POP Server Address.
Setting/ Procedure	• SMTP Server Address Version 4 format [0 to 255] . [0 to 255] . [0 to 255] . [0 to 255] 1. Touch "Host Address" key. 2. Select "IP Address Input", and enter the IP address. 3. Select "Host Name Input" to enter the host name, and touch "OK" key. 4. Enter the Login Name. 5. Enter the password.

<Detail Setting: APOP Authentication>

Functions	• To set whether to use APOP Authentication
Use	• To use APOP Authentication
Setting/ Procedure	• The default setting is OFF. ON "OFF"

<Detail Setting: Port No.>

Functions	• To set the Port No. for transmitting with POP server.
Use	• To enter the Port No. for transmitting with POP server.
Setting/ Procedure	1. Press the Clear key. 2. Enter the Port No. between 1 and 65535 using the 10-Key Pad.

<Detail Setting: Connection Timeout>

Functions	• To set the timeout period for connection in receiving e-mail to POP server.
Use	• To set the timeout period of connection in receiving e-mail to POP server.
Setting/ Procedure	• Select the timeout period of connection using +30/-30 keys.

I. Detail Setting

(1) Device Setting

<MAC Address>

Functions	• To display the MAC address of the machine.
Use	• To check the MAC address of the machine.
Setting/ Procedure	• The address cannot be changed.

<Network Speed>

Functions	<ul style="list-style-type: none"> To set the Network speed.
Use	<ul style="list-style-type: none"> To set the specific network speed.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Auto. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> "Auto" 10Mbps Full Duplex 10Mbps Half Duplex </div> <div style="display: flex; justify-content: space-around; margin-top: 10px;"> 100Mbps Full Duplex 100Mbps Half Duplex </div> <p>NOTE</p> <ul style="list-style-type: none"> Make sure to turn the main power switch OFF and ON again after changing the network speed.

(2) Time Adjustment Setting

<NTP Setting>

Functions	<ul style="list-style-type: none"> To set whether to enable or disable the NTP setting.
Use	<ul style="list-style-type: none"> To synchronize the time between the server and the client.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> ON "OFF" </div>

<NTP Server Address>

Functions	<ul style="list-style-type: none"> To set the NTP server address.
Use	<ul style="list-style-type: none"> To enter the NTP server address.
Setting/ Procedure	<ul style="list-style-type: none"> IP Address Version 4 format [0 to 255] . [0 to 255] . [0 to 255] . [0 to 255] <ol style="list-style-type: none"> 1. Touch "Host Address" key. 2. Select "IP Address Input", and enter the IP address. 3. Select "Host name Input", and enter the host name.

<Port No.>

Functions	<ul style="list-style-type: none"> To set the Port No. for transmitting with NTP server.
Use	<ul style="list-style-type: none"> To enter the Port No. for transmitting with NTP server.
Setting/ Procedure	<ol style="list-style-type: none"> 1. Press the Clear key. 2. Enter the Port number between 1 and 65535 using the 10-Key Pad.

(3) Status Notification Setting

<Notification Address Setting>

Functions	<ul style="list-style-type: none"> To set the e-mail address for notifying the machine condition.
Use	<ul style="list-style-type: none"> To set the e-mail address for notifying the machine condition.
Setting/ Procedure	<ol style="list-style-type: none"> 1. Touch "E-mail Address Edit" key. 2. Enter the password (up to 320 characters) on the on-screen keyboard, and touch "OK" key.

<Notification Item Setting>

Functions	<ul style="list-style-type: none"> • To set the item for notifying the machine condition with e-mail.
Use	<ul style="list-style-type: none"> • To set the item for notifying the machine condition with e-mail.
Setting/ Procedure	<ol style="list-style-type: none"> 1. Select the item to be notified and touch "ON" key. 2. Touch "OK" key.

<Notification Time Setting>

Functions	<ul style="list-style-type: none"> • To set the time necessary for notifying the machine condition by e-mail.
Use	<ul style="list-style-type: none"> • To change the time necessary for notifying the machine condition by e-mail.
Setting/ Procedure	<ol style="list-style-type: none"> 1. Press the Clear key. 2. Enter the time for notifying between 1 and 10 using the 10-Key Pad.

(4) PING Confirmation

Functions	<ul style="list-style-type: none"> To set the TCP/IP network diagnosis by PING.
Use	<ul style="list-style-type: none"> To check the condition of TCP/IP network.
Setting/ Procedure	<ol style="list-style-type: none"> 1. Touch "Host Address" key for PING transmission. 2. Select "IP Address Input" to enter IP address. 3. Select "Host Name Input" to enter the host name. 4. Touch "Check Connection" key to check the connection.

(5) Web Connection Setting

Functions	<ul style="list-style-type: none"> To set whether to use the Web Connection.
Use	<ul style="list-style-type: none"> Not to use the Web Connection.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Enable. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> “Enable” Disable </div>

(6) SLP Setting

Functions	• To set whether to use SLP or not.
Use	• Not to use SLP.
Setting/ Procedure	<ul style="list-style-type: none"> • The default setting is Enable. <div style="display: flex; justify-content: space-around;"> “Enable” Disable </div>

(7) LPD Setting

Functions	<ul style="list-style-type: none"> To set whether to use LPD during printing or not.
Use	<ul style="list-style-type: none"> Not to use LPD during printing.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Enable. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> “Enable” Disable </div>

(8) SNMP Setting

Functions	<ul style="list-style-type: none"> To set whether to use SNMP or not.
Use	<ul style="list-style-type: none"> Not to use SNMP.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is ON. <div style="text-align: center;"> <div>“ON”</div> <div>OFF</div> </div> <p>Read Community name: Enter the Read Community name. Write Community Name: Enter the Write Community Name.</p>

(9) Prefix/Suffix Setting

<ON/OFF Setting>

Functions	<ul style="list-style-type: none"> To set whether to add Prefix or Suffix to the address when calling or entering an address.
Use	<ul style="list-style-type: none"> To add Prefix or Suffix to the address.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> ON “OFF” </div>

<Prefix/Suffix Setting>

Functions	<ul style="list-style-type: none"> To register or change the Prefix or Suffix. Eight types of Prefix and Suffix can be added. Prefix: Letters added to the top of the text (Header part) Suffix: Letters added to the bottom of the text (Footer part)
Use	To register or change the address displayed for Prefix or Suffix.
Setting/ Procedure	<ul style="list-style-type: none"> Prefix can be registered with up to 20 letters Suffix can be registered with up to 64 letters

8.6.6 Copier Setting

A. Auto Zoom (Platen)

Functions	<ul style="list-style-type: none"> To set whether to automatically set the Auto Zoom when the original is detected to be set on the original glass while the Paper Take-up Tray is selected (except APF).
Use	<ul style="list-style-type: none"> To automatically set the Auto Zoom when the Paper Take-up Tray is selected.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> ON “OFF” </div>

B. Auto Zoom (ADF)

Functions	<ul style="list-style-type: none"> To set whether to automatically set the Auto Zoom when the original is detected to be set on ADF while the Paper Take-up Tray is selected (except APF).
Use	<ul style="list-style-type: none"> To automatically set the Auto Zoom when the Paper Take-up Tray is selected.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is ON. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> “ON” OFF </div>

C. Select Tray when APS OFF

Functions	• To set the Tray to be used when APS is cancelled.
Use	• To set the Tray for the default setting when canceling APS.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Tray Before APS ON. <div style="display: flex; justify-content: space-around;"> "Tray Before APS ON" Default Tray </div>

D. Select Tray for Insert Sheet

Functions	• To select the initial value for the Tray for the Cover sheet paper.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Tray 2.

E. Print Jobs During Copy Operation

Functions	• To set whether to receive printing jobs for Print data or Fax data during copy operation.
Use	<ul style="list-style-type: none"> To restrict receiving printing jobs for Print data or Fax data during copy operation. <div style="display: flex; justify-content: space-between;"> Accept : Receives the Print data or Fax data and print </div> <div style="display: flex; justify-content: space-between;"> Receive Only : Print data or Fax data will be printed when the copy operation is finished </div>
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Accept. <div style="display: flex; justify-content: space-around;"> "Accept" Receive Only </div>

8.6.7 Printer Setting**A. Local I/F Timeout**

Functions	• To set the timeout period for I/F transmission.
Use	• To make the timeout period longer according to the network condition.
Setting/ Procedure	<ul style="list-style-type: none"> Settings have to be done separately for IEEE1284, USB, and Network. The default settings are 60 sec. <div style="text-align: center;">"60 sec" (10 to 1000)</div>

B. Parallel I/F

Functions	• To set the two-way communication method for Parallel interface.
Use	• To change the two-way communication method for Parallel interface.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is ECP. <div style="display: flex; justify-content: space-around;"> Compatible Nibble "ECP" </div>

C. IEEE 1284/USB

Functions	• To set the interface to be used when mounting the local I/F kit.
Use	• To be used when using the Parallel interface.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is USB. <div style="display: flex; justify-content: space-around;"> IEEE1284 "USB" </div>

8.6.8 Fax Setting

- Settings are available only when the Optional FAX kit (FK-502) is mounted.

A. Header Information

Functions	• To register the name of the sender and Fax ID which will be printed when transmitting Fax.
Use	• To register or change the name of the sender and Fax ID
Setting/ Procedure	1. Touch "Sender Name" Key and enter the name of the sender (up to 30 characters) on the on-screen keyboard.

B. Header/Footer Position

(1) Header Position

Functions	• To set the position to print the header when transmitting Fax.
Use	• To change the position to print the Header
Setting/ Procedure	<ul style="list-style-type: none"> • The default setting is Outside Body Text. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> Inside Body Text "Outside Body Text" OFF </div>

(2) Footer Position

Functions	• To set whether to print the Footer when transmitting Fax.
Use	• To print the Footer when transmitting Fax.
Setting/ Procedure	<ul style="list-style-type: none"> • The default setting is OFF. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> Inside Body Text Outside Body Text "OFF" </div>

C. Telephone Line Settings

(1) Dialing Method

Functions	• To set the Dialing method.
Use	<ul style="list-style-type: none"> • To change the dialing method. • The displays are different depending on the country.
Setting/ Procedure	<ul style="list-style-type: none"> • The default setting is PB. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> "PB" 10 pps </div> <p>NOTE</p> <ul style="list-style-type: none"> • The displays are different depending on the country.

(2) Receive Mode

Functions	• To set the Fax reception mode.
Use	• To change to manual reception when using the remote reception function, etc. when connected to the external telephone.
Setting/ Procedure	<ul style="list-style-type: none"> • The default setting is Auto RX. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> "Auto RX" Manual RX </div>

(3) Number of RX Call Rings

Functions	<ul style="list-style-type: none"> To set the number of times to receive call rings.
Use	<ul style="list-style-type: none"> To change the number of times of the fake RingBack tone after it starts calling until it starts receiving.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is 2 X. <p style="text-align: center;">“2 X” (0 to 15)</p>

(4) Number of Redials

Functions	<ul style="list-style-type: none"> To set the number of redials.
Use	<ul style="list-style-type: none"> To change the number of times to redial when the line is busy, etc. The line which can be set up is different depending on the country.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is 3 X. <p style="text-align: center;">"3 X" (0 to 7)</p> <p>NOTE</p> <ul style="list-style-type: none"> The line which can be set up is different depending on the country.

(5) Radial Interval

Functions	<ul style="list-style-type: none"> To set the interval for redialing.
Use	<ul style="list-style-type: none"> To change the interval for redialing.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is 3 min. <p style="text-align: right;">“3 min” (1 to 15)</p>

(6) Line Monitor Sound

Functions	<ul style="list-style-type: none"> To set whether to output the Line monitor sound from the speaker or not.
Use	
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF.
	<div style="display: flex; justify-content: space-around;"> ON “OFF” </div>

(7) Line Monitor Sound Volume

Functions	<ul style="list-style-type: none"> • To set the volume of the speaker.
Use	<ul style="list-style-type: none"> • To change the volume of the speaker.
Setting/ Procedure	<ul style="list-style-type: none"> • Change the volume by touching the “Lower” or “Higher” keys.

D. TX/RX Setting

(1) Duplex Print (RX)

Functions	<ul style="list-style-type: none"> To set whether to carry out the Duplex print for the received original when receiving Fax.
Use	<ul style="list-style-type: none"> To carry out the Duplex print for the received original.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> ON "OFF" </div>

(2) Print Paper Selection

Functions	<ul style="list-style-type: none"> To set the priority for Paper Take-up Tray when receiving Fax.
Use	<ul style="list-style-type: none"> To change the priority for Paper Take-up Tray when receiving Fax. <ul style="list-style-type: none"> Auto select : Selected automatically Priority Size : Printed on size with priority. When the size is not set, it will be printed on the closest Size. Fixed Size : Printed only on the fixed size.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Auto Select. <div> "Auto Select" Fixed Size Priority Size </div>

(3) Print Paper Size

Functions	<ul style="list-style-type: none"> To set the paper size to print the text when receiving Fax.
Use	<ul style="list-style-type: none"> To change the paper size for printing the received text. The displays are different depending on the country. To make the setting of "Print Paper Size" enable, set "Tray Selection for RX Print" to "Auto."
Setting/ Procedure	<ul style="list-style-type: none"> The initial setting is A4. <div> A3 B4 "A4" </div> <p>NOTE</p> <ul style="list-style-type: none"> The displays are different depending on the country.

(4) Incorrect User Box No. Entry

Functions	<ul style="list-style-type: none"> To set the operation when the unregistered box number is entered.
Use	<ul style="list-style-type: none"> To change the operation when the unregistered box number is entered.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Print. <div> "Print" Show Error Message Auto Create User Box </div>

(5) Tray Selection for RX Print

Functions	<ul style="list-style-type: none"> To select the Paper Tray to be fixed when printing the received text.
Use	<ul style="list-style-type: none"> To fix the Paper tray when printing the received text.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Auto. Items available for selection are different depending on the Paper feed option mounted. <div> "Auto" Tray 1 Tray 2 Tray 3 Tray 4 </div>

(6) Min. Reduction for RX Print

Functions	<ul style="list-style-type: none"> To set the print magnification for received text.
Use	<ul style="list-style-type: none"> To change the print magnification for received text.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is 96. <p style="text-align: right;">“96” (87 to 96)</p>

(7) Print Separate Fax Pages

Functions	<ul style="list-style-type: none"> To set whether to divide the original into pages when it is longer than the standard size.
Use	<ul style="list-style-type: none"> To divide the original into pages when it is longer than the standard size.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> ON “OFF” </div>

(8) File After Polling TX

Functions	<ul style="list-style-type: none"> To set whether to delete the original which Polling transmission has been completed.
Use	<ul style="list-style-type: none"> For not deleting the original which polling transmission has been completed.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Delete. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> “Delete” Save </div>

E. Function Setting

(1) Function ON/OFF Setting

<F Code TX>

Functions	<ul style="list-style-type: none"> To set whether to use the F Code transmission.
Use	<ul style="list-style-type: none"> To cancel the F Code transmission.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is ON. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> “ON” OFF </div>

(2) Memory RX

Functions	<ul style="list-style-type: none"> To set whether to use the forced memory RX function.
Use	<ul style="list-style-type: none"> To store the received text in the hard disk without printing, and print it out when ordered.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. <div style="display: flex; justify-content: space-around; margin: 10px 0;"> ON “OFF” </div> <ul style="list-style-type: none"> Enter the password (up to 8 digits) for printing when set to ON.

(3) Closed Network RX

Functions	<ul style="list-style-type: none">To set whether to use the closed network function.
Use	<ul style="list-style-type: none">To receive data only from the device which password matches.
Setting/ Procedure	<ul style="list-style-type: none">The default setting is OFF.<div>ON"OFF"</div>When set to ON, enter the password (up to 4 digits) to be used.

(4) Forward TX Setting

Functions	<ul style="list-style-type: none">To set whether to use the Forward Fax function.
Use	<ul style="list-style-type: none">To forward the received text to the receiver which has been specified.<div>Forward & Print : Forward the received text, and print all out Forward & Print (If TX Fails): Forward the received text, and prints out only when fails to be forwarded</div>
Setting/ Procedure	<ul style="list-style-type: none">The default setting is OFF.<div>"OFF" Forward & Print Forward & Print (If TX Fails)</div>When set to ON, set the address to forward to.

(5) Confidential RX Password Check

Functions	<ul style="list-style-type: none">To check the password set in the confidential box.
Use	
Setting/ Procedure	

(6) Fax RX Setting

Functions	<ul style="list-style-type: none">To set whether to use the PC-FAX reception function.
Use	<ul style="list-style-type: none">To store the received text file in the box in the hard disk.
Setting/ Procedure	<ul style="list-style-type: none">The default setting is OFF.<div>ON"OFF"</div>When set to ON, specify the address to store the file.

(7) TSI User Box Setting

Functions	<ul style="list-style-type: none">To set whether to use TSI distribution or not.
Use	<ul style="list-style-type: none">To use TSI distribution.
Setting/ Procedure	<ul style="list-style-type: none">The default setting is OFF.<div>ON"OFF"</div>When set to ON, set the reception box to receive data

F. PBX CN Set

Functions	• To set whether to use PBX connection setting or not.
Use	• This will be used when the machine is connected to PBX line.
Setting/ Procedure	• The default setting is OFF. <div>ON"OFF"</div> • When set to ON, enter the external number between 0 and 9999.

G. Report Settings

(1) Activity Report

Functions	• To set whether to print out the Activity Report or not, and also the timing for printing.
Use	• To print out the Activity Report.
Setting/ Procedure	• The default setting is OFF. <div>"OFF"DailyEvery 100 Comm.100/ Daily</div>

(2) TX Report

Functions	• To set whether to print out the TX Report, and also the timing for printing.
Use	• To print out the TX Report.
Setting/ Procedure	• The default setting is OFF. <div>ONIf TX Fails"OFF"</div>

(3) Sequential TX Report

Functions	• To set whether to print out the Sequential TX Report or not.
Use	• To print out the Sequential TX Report.
Setting/ Procedure	• The default setting is OFF. <div>ON"OFF"</div>

(4) Timer Reservation TX Report

Functions	• To set whether to print out the reservation TX or not.
Use	• To print out the reservation TX.
Setting/ Procedure	• The default setting is OFF. <div>ON"OFF"</div>

(5) Confidential RX Report

Functions	• To set whether to print out the Confidential RX Report.
Use	• To print out the Confidential RX Report.
Setting/ Procedure	• The default setting is OFF. <div>ON"OFF"</div>

(6) Bulletin TX Report

Functions	• To set whether to print out the Bulletin TX Report or not.
Use	• To print out the Bulletin TX Report.
Setting/ Procedure	• The default setting is OFF. ON "OFF"

(7) Broadcast Result Report

Functions	• To set the format to output the Broadcast Result Report.
Use	• To print out the Broadcast Result Report All Dest. : Outputs all reports after transmitting to all addresses 1 Dest. at a time : Outputs a report after each transmission
Setting/ Procedure	• The default setting is All Dest. "All Dest." 1 Dest. at a time

(8) Paper Tray for Reports

Functions	• To set the Paper Take-up Tray to output reports.
Use	
Setting/ Procedure	• The default setting is Tray 2. • Items available to be selected are different depending on Paper feed option mounted. Bypass Tray Tray 1 "Tray 2" Tray 3 Tray 4

(9) TX Result Report Check

Functions	• To set whether to display the TX Result Report screen.
Use	• To display the TX Result Report screen.
Setting/ Procedure	• The default setting is OFF. ON "OFF"

H. Job Settings List

Functions	• The set value list of the fax set up into this machine can be printed.
Use	
Setting/ Procedure	1. Touch "Administrator Setting" → "Fax Setting" → "Job Settings List" key. 2. Select the Paper Take-up Tray and press the Start key.

8.6.9 System Connection**A. OpenAPI Setting****(1) Access Setting**

Functions	• To allow or restrict the access from other systems with IS OpenAPI when using Page Scope Data Administrator.
Use	• To restrict access from other systems with IS OpenAPI.
Setting/ Procedure	• The default setting is Allow. "Allow" Restrict

(2) Port No.

Functions	<ul style="list-style-type: none"> To set the access port for other systems with IS OpenAPI when using Page Scope Data Administrator.
Use	<ul style="list-style-type: none"> To change the access port number for other systems with IS OpenAPI.
Setting/ Procedure	<ol style="list-style-type: none"> Select Port No. or Port Number (SSL), and touch "Input" key. Press the Clear key. Enter the port number between 1 and 65535 using the 10-Key Pad.


(3) SSL

Functions	<ul style="list-style-type: none"> To set whether to encrypt access from other systems by SSL when using Page Scope Data Administrator.
Use	<ul style="list-style-type: none"> To encrypt access by SSL from other systems using IS OpenAPI.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> ON "OFF" </div>

(4) Authentication

Functions	<ul style="list-style-type: none"> To set whether to authenticate access of other systems which uses OpenAPI when using Data Administrator.
Use	<ul style="list-style-type: none"> To set authentication of the access from other systems using OpenAPI.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> ON "OFF" </div> <ul style="list-style-type: none"> When setting to ON, enter the Login Name and the Password to be set.

B. Admin. transmission

Functions	<ul style="list-style-type: none"> To call the CS Remote Care Center from the Administrator, When the CS Remote Care setup is complete.
Use	
Setting/ Procedure	<p> For details, see page 248 "CS Remote Care."</p>

8.6.10 Security Setting

A. Administrator Password

Functions	<ul style="list-style-type: none"> To set/change the Administrator Password.
Use	<ul style="list-style-type: none"> To change the Administrator Password.
Setting/ Procedure	<ul style="list-style-type: none"> Enter the Administrator password on the on-screen keyboard. <div style="margin-left: 40px; margin-top: 10px;"> <p>Current Password : Enter the current Administrator password</p> <p>New Password : Enter the new Administrator password to be used</p> <p>Re-Input Password : Reenter the new Administrator password</p> </div> <p>NOTE</p> <ul style="list-style-type: none"> When selecting Utility → "Administrator Setting" → "Security Setting" → "Security Details" leads to "Password Rules" being ON, the password with same characters and the same password with the one prior to change will not be changed.

B. User Box Admin. Setting

Functions	• To set whether to allow or restrict the Box Administrator to use the system.
Use	• To allow the Box Administrator to use the system.
Setting/ Procedure	• The default setting is Restrict. Allow "Restrict"

C. Administrator Security Level

Functions	• To set the level for Administrator setting item open to the user.
Use	• To make part of the Administrator setting items open to the user. Level 1 : "Power Save Setting", "Auto Magnification Selection (Platen)", "Auto Magnification Selection (ADF)", "Specify Default Tray when APS Off", and "Select Tray for Insert Sheet" are available to users. Level 2 : "Power Save Setting", "Output Setting", "Date/Time Setting", "Daylight Savings Time Setting", "AE Level Adjustment", "Auto Magnification Selection (Platen)", "Auto Magnification Selection (ADF)", "Specify Default Tray when APS Off", "Select Tray for Insert Sheet", and "Print Jobs During Copy Operation" are available to users. Prohibit : Not to allow the user to set neither Level 1 nor Level 2
Setting/ Procedure	• The default setting is Prohibit. Level 1 Level 2 "Prohibit"

D. Security Details**(1) Password Rules**

Functions	• To set whether to apply the Password rules.
Use	• To apply the password rule to enhance security. • Passwords to be covered: Password for CE, Administrator, Box user authentication, Fax confidential print, Classified document, User authentication, and Box transmission • Details of the Password Rules: Password except User password, Box transmission password shall be 8 digits of one-bite alphanumeric characters. (Case-sensitive) User password shall be 8 digits of one-bite alphanumeric characters. (Case-sensitive) Box transmission password shall be 8 digits of one-bite alphanumeric characters. Password with only the same letter is prohibited. Password same with the one prior to change is prohibited. When the password rule is set to ON, the password cannot be changed or registered unless it follows the above conditions.
Setting/ Procedure	• The default setting is OFF. ON "OFF"

(2) Manual Destination Input

Functions	• To set whether to allow or prohibit to manually enter the destination address on the Destination Input screen.
Use	• To prohibit entering the destination address manually.
Setting/ Procedure	• The default setting is Allow. "Allow" Restrict

(3) Print Data Capture

Functions	<ul style="list-style-type: none"> To set whether to allow or restrict capturing the Print Job Data.
Use	<ul style="list-style-type: none"> To be used when carrying out Service Mode → System 2 → Data capture.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Allow. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> "Allow" Restrict </div>

E. HDD Setting

(1) Check HDD Capacity

Functions	<ul style="list-style-type: none"> To display the used space capacity, total space capacity, and the remaining capacity of the hard disk.
Use	<ul style="list-style-type: none"> To check the capacity and the status of use of the hard disk

(2) Delete Unused User Box

Functions	<ul style="list-style-type: none"> To delete the unnecessary box without data.
Use	
Setting/ Procedure	<ol style="list-style-type: none"> 1. Touch "Delete Unused User Box" key. 2. Touch "Yes" key on the Check screen.

(3) Delete Secure Documents

Functions	<ul style="list-style-type: none"> To delete the whole classified documents in the hard disk.
Use	
Setting/ Procedure	<ol style="list-style-type: none"> 1. Touch "Delete Secure Documents" key. 2. Touch "Yes" key on the Check screen.

(4) Overwrite All Data

Functions	<ul style="list-style-type: none"> To delete the whole data in the hard disk by overwriting.
Use	
Setting/ Procedure	<ol style="list-style-type: none"> 1. Touch "Overwrite All Data" key. 2. Touch "Overwrite" key. 3. Touch the "Yes" key on the Check screen.

(5) HDD Lock Password

Functions	<ul style="list-style-type: none"> To set the Lock Password for the hard disk.
Use	<ul style="list-style-type: none"> To enter the Lock Password for the hard disk.
Setting/ Procedure	<ol style="list-style-type: none"> 1. Touch "HDD Lock Password" key. 2. Enter the password (up to 20 on-byte characters) on the on-screen keyboard, and touch "OK" key. 3. Reenter the password to confirm. 4. Turn main power switch OFF and ON again.

9. Adjustment item list

Replacement Part/Service Job													
Adjustment/Setting Items				No	Replace Paper Take-Up Roller	Replace Paper Separator Roll Assy	Change Paper (1st Drawer) Kind	Change Marketing Area	Install Paper Feed Unit	Replace CCD Unit	Replace Mirror Unit	Replace IU	Replace Image Transfer Belt Unit
Service Mode	Machine	Printer Area	Print Positioning: Leading Edge	1			○						
			Print Positioning: Side Edge	2				○					
			Dup Print Positioning: Side	3									
			Paper Feed Direction Adj.	4					(3)	(3)			
		LPH Chip Adjust		5									
		LPH Rank (Changes to 1)		6									
		Scan Area	Image position: Leading Edge	7									
			Image position: Side Edge	8					(5)				
			Cross Direction Adjustment	9					(4)				
			Feed Direction Adjustment	10						(4)			
		Org. Detecting Sensor Adj.		11				○					
	Touch Panel Adjust		12										
	State Confirmation	Memory/HDD Adjust	HDD R/W Check	13									
			HDD Format	14									
	Table Number		15										
	Firmware Version			16									
	System1, 2	Reentry of Setting Values		17									
		Serial Number		18									
		Scan calibration		19					(1)				
		Line Mag Setting		20					(2)				
	Counter	Life	Counter Clear	21	○	○							
	Image Process Adjustment		Gradation Adjust	22								○	○
Re-entry of Utility settings			23										
Re-entry of Enhanced Security settings			24										
Parallel adjustment of Scanner/Mirrors Carriage			25							(1)			
Positioning Exposure Unit			26							(2)			
Scanner Motor belt adjustment			27										
F/W upgrading			28										
Installation of Original Size Sensor			29										
Remounting of Parameter Chip (Control Board)			30										
Remounting of NVRAM (MFP Control Board)			31										
Replace Image Transfer Belt Unit			32										

* This table shows the adjustment items that are required when a part of the machine has been replaced. Priority order, if applicable, during the adjustment procedures is indicated by the corresponding number in the parentheses.

No	Replace Image Transfer Roller Unit	Replace Paper Dust Remover	Replace Original Size Detecting Sensor	Replace LPH Assy	Replace LPH Unit	Wind Scanner Drive Cables	Replace Scanner Motor	Replace Scanner Assy	Replace Scanner Home Sensor	Replace Control Board	Replace MFP Control Board	Replace Image Processing Board	Replace Original Glass	Replace IDC/Registration Sensor/1,2	Replace Hard Disk	Add Key Counter D-103	Execute Memory Clear	Execute Add. Option	Execute F/W update	Add FAX Board
1				(3)	(3)															
2				(4)	(4)															
3																				
4						(4)	(2)	(2)												
5				(2)	(2)															
6				(1)	(1)															
7													(2)							
8									○			(1)								
9																				
10						(5)	(3)	(3)												
11			(3)																	
12																	(6)			
13															(2)					
14															(1)					
15			(2)														(2)			
16																		○	○	
17																	(4)			
18																	(3)			
19																				
20																				
21	○	○																		
22																				
23																	(1)			
24																○	(5)			
25						(2)														
26						(3)		(1)												
27						(1)	(1)													
28										(2)	(2)	○								○
29			(1)																	
30										(1)										
31											(1)									
32														○						

10. Service Mode

10.1 Service Mode function setting procedure

NOTE

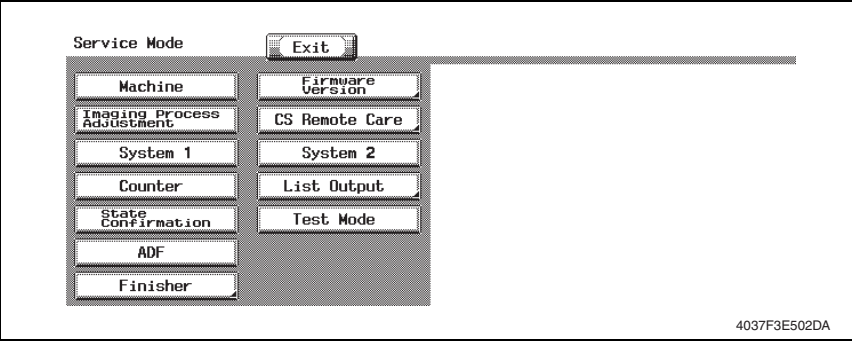
- Ensure appropriate security for Service mode function setting procedures. They should NEVER be shown to any unauthorized person not involved with service jobs.

A. Procedure

1. Press the Utility/Counter key.
2. Touch “Details” on “Meter Count” display.
3. Press the following keys in this order.
Stop → 0 → 0 → Stop → 0 → 1

NOTES

- When selecting “CE Authentication” under “Enhanced Security” available from Service Mode, authentication by CE password is necessary.
Enter the 8 digits CE password, and touch “OK” key.
(The initial setting for CE password is “92729272.”)
 - If a wrong CE password is entered, re-enter the right password. The machine will not enter Service Mode unless the CE password is entered correctly. To return to the Basic screen, turn Main Power Switch OFF, and ON again.
 - The service code entered is displayed as “*.”
4. The Service Mode menu will appear.



NOTE

- Be sure to change the CE Password from its default value.
- For the procedure to change the CE Password, see the Enhanced Security.

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B. Exiting

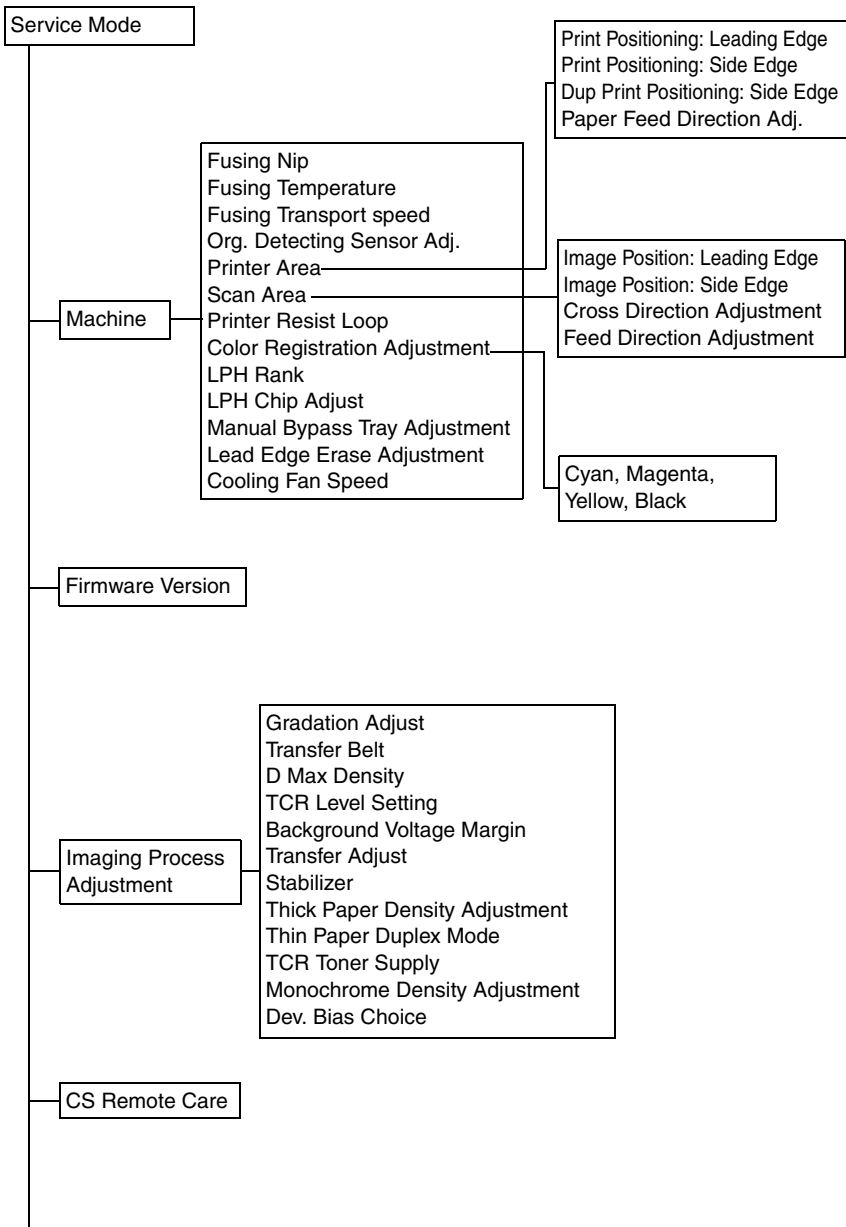
- Touch the “Exit” key.

C. Changing the Setting Value in Service Mode Functions

- Use the +/- key to enter or change the setting value.
- Use the 10-Key Pad to enter the setting value. (To change the setting value, first press the Clear key before making an entry.)

10.2 Service Mode function tree

* The function tree is shown to comply with the format displayed on the screen.



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info+ 450

Adjustment / Setting

Service Mode

System 1

- Marketing Area
- Tel/Fax Number
- Serial Number
- No Sleep
- Foolsap Size Setting
- Original Size Detection
- Install date
- Initialization

System 2

- HDD
- Image Controller Setting
- Option Board Status
- Consumable Life Rminder
- Unit Change
- Software Switch Setting
- Scan Calibration
- LCT Paper Size Setting
- Line Mag Setting
- Data Capture

Counter

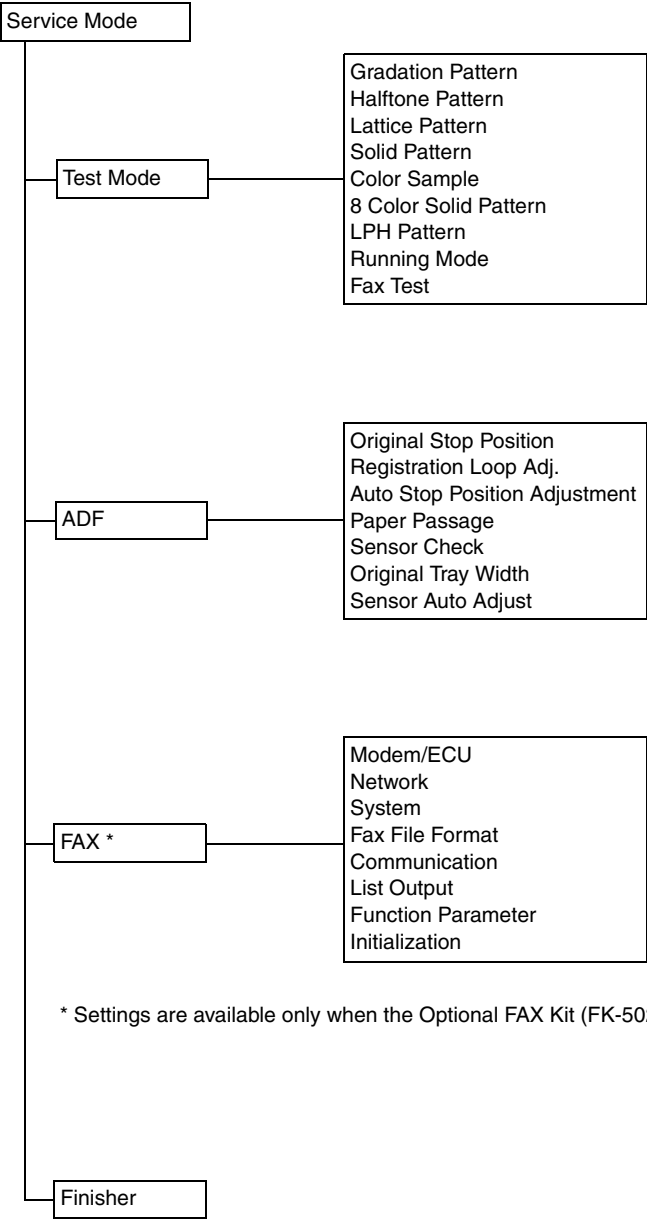
- Life
- Jam
- Service Call Counter
- Warning
- Maintenance
- Service Total
- Counter Of Each Mode
- Service Call History (Data)
- ADF Paper Pages
- Paper Jam History
- Fax Connection Error
- Counter Reset

List Output

State Confirmation

- Sensor Check
- Table Number
- Level History1
- Level History2
- Temp. & Humidity
- CCD Check
- Memory/HDD Adj.
- Memory/HDD State
- Color Regist
- IU Lot No.
- LPH Status
- Adjustment Data List

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* Settings are available only when the Optional FAX Kit (FK-502) is mounted.

10.3 Date/Time Input mode

- This mode is used to set time-of-day and date.

10.3.1 Date/Time Input mode screen

4037F3E504DA

A. Date/Time input mode setting procedure

<Procedure>

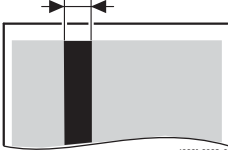
- Call the Service Mode to the screen.
- Press the following keys in this order.
Stop → 1 → 1 → 4 → 4 → Clear
- Enter year, month, day, hour, and minute, in that order, from 10-key Pad.
(Year 4 digits → Month 2 digits → Day 2 digits → Hour 2 digits → Minute 2 digits)

NOTE

- When setting the month, day, hour, or minute, enter “0” first if the data one digit.**
- Make sure that correct figures have been entered and then touch “Entry.”
 - Touch “END” key to return to the Service Mode.

10.4 Machine

10.4.1 Fusing Nip

Functions	<ul style="list-style-type: none">• To check the Fusing Roller nip width.
Use	<ul style="list-style-type: none">• When a fusing failure occurs.• When a blurred image or brush effect occurs.
Check Range	<div><div><div>A</div><div></div></div><div>A: 9 ± 0.5 mm.</div></div>
Adjustment Procedure	<ol style="list-style-type: none">1. Call the Service Mode to the screen.2. Touch these keys in this order: "Machine" → "Fusing Nip"3. Press the Start key to let the machine produce a test pattern.4. Check the fusing roller nip width.

10.4.2 Fusing Temperature

Functions	<ul style="list-style-type: none">To adjust individually the temperature of the Heating Roller and the Fusing Pressure Roller for each type of paper, thereby coping with varying fusing performance under changing environmental conditions.* Though all temperatures shown on the screen are 0 °C, they represent the following specific temperatures. <table><tr><td></td><td>Heating Roller</td><td>Pressure Roller</td></tr><tr><td>Plain paper</td><td>195 °C</td><td>145 °C</td></tr><tr><td>OHP film</td><td>190 °C</td><td>170 °C</td></tr><tr><td>Thick 1</td><td>175 °C</td><td>130 °C</td></tr><tr><td>Thick 2</td><td>185 °C</td><td>130 °C</td></tr><tr><td>Thick 3</td><td>185 °C</td><td>130 °C</td></tr><tr><td>Envelope</td><td>185 °C</td><td>130 °C</td></tr></table>		Heating Roller	Pressure Roller	Plain paper	195 °C	145 °C	OHP film	190 °C	170 °C	Thick 1	175 °C	130 °C	Thick 2	185 °C	130 °C	Thick 3	185 °C	130 °C	Envelope	185 °C	130 °C
	Heating Roller	Pressure Roller																				
Plain paper	195 °C	145 °C																				
OHP film	190 °C	170 °C																				
Thick 1	175 °C	130 °C																				
Thick 2	185 °C	130 °C																				
Thick 3	185 °C	130 °C																				
Envelope	185 °C	130 °C																				
Use	<ul style="list-style-type: none">When fusing performance is poor, or wax streak or offset occurs when the type of paper is changed or environmental conditions change.																					
Adjustment Range	Heating Roller : -10 °C to +5 °C (step: 5 °C)..... Plain paper : -5 °C to +5 °C (step: 5 °C)..... Envelope : -20 °C to +5 °C (step: 5 °C)..... others Pressure Roller : -20 °C to +5 °C (step: 5 °C)..... OHP film : -5 °C to +5 °C (step: 5 °C)..... others																					
Adjustment Instructions	If fusing performance is poor, increase the setting. If wax streaks occur, decrease the setting. If offset is poor, decrease the setting.																					
Adjustment Procedure	<ol style="list-style-type: none">1. Call the Service Mode to the screen.2. Touch these keys in this order: "Machine" → "Fusing Temperature."3. Select the paper type and Fusing Roller type.4. Enter the new setting from the +/- key Pad.5. The temperature does not change immediately when the setting is change. Wait a while before performing the subsequent steps.• As a general rule, do not adjust the fusing temperature on the pressure application side.6. Touch "END" to validate the adjustment value.7. Check the copy image for any image problem.8. Make the adjustment for each type of paper.																					

10.4.3 Fusing Transport Speed

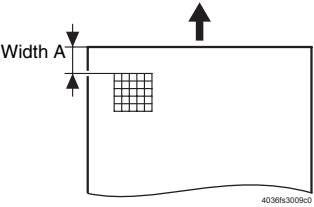
Functions	<ul style="list-style-type: none"> To adjust the speed of the Fusing Drive Motor so as to match the fusing speed with transport speed. 								
Use	<ul style="list-style-type: none"> Brush effect or blurred image is evident as a result of changes in environmental conditions or degraded durability. 								
Variable Range	-2 % to +2 % (in 0.1 % increments)								
Adjustment Instructions	<p>If brush effect is evident, vary the setting value and check for image.</p> <p>If a blurred image occurs, decrease the setting.</p>								
Adjustment Procedure	<ol style="list-style-type: none"> Call the Service Mode to the screen. Touch these keys in this order: "Machine" → "Fusing Transport Speed." Select the transport speed, at which the brush effect or blurred image has occurred. <table border="1"> <thead> <tr> <th>Transport speed</th><th>Paper Setting</th></tr> </thead> <tbody> <tr> <td>215 mm/s</td><td>Plain paper: monochrome</td></tr> <tr> <td>165 mm/s</td><td>Plain paper: color</td></tr> <tr> <td>60 mm/s</td><td>Thick paper, OHP film, Envelope, Postcard, Labels: monochrome, color</td></tr> </tbody> </table> <ol style="list-style-type: none"> Enter the new setting from the 10-Key Pad. Touch "END" to validate the adjustment value. Check the copy image for any image problem. <p>* Make the adjustment for each paper type.</p>	Transport speed	Paper Setting	215 mm/s	Plain paper: monochrome	165 mm/s	Plain paper: color	60 mm/s	Thick paper, OHP film, Envelope, Postcard, Labels: monochrome, color
Transport speed	Paper Setting								
215 mm/s	Plain paper: monochrome								
165 mm/s	Plain paper: color								
60 mm/s	Thick paper, OHP film, Envelope, Postcard, Labels: monochrome, color								

10.4.4 Org. Detecting Sensor Adj.

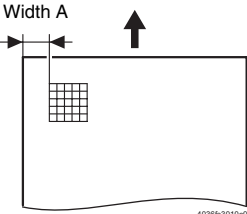
Functions	<ul style="list-style-type: none"> To automatically adjust the original detection distance for the Original Size Sensor.
Use	<ul style="list-style-type: none"> When the sensor is replaced with a new one. When an optional sensor has been added. When an erroneous original size detection is made. When the marketing area setting is changed.
Adjustment Instructions	<p>If the adjustment has been successfully made, it completes the adjustment procedure.</p> <p>If the adjustment has turned out to be unsuccessful, check the optional Original Size Sensors for correct installation and change the defective sensor or harness.</p>
Adjustment Procedure	<ol style="list-style-type: none"> Place a blank sheet of A3 or 11 × 17 paper on the Original Glass and lower the Original Cover. Call the Service Mode to the screen. Touch these keys in this order: "Machine" → "Org. Detecting Sensor Adj." Press the Start key.

10.4.5 Printer Area

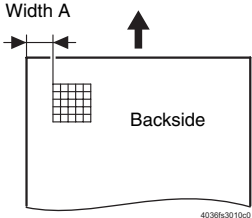
A. Print Positioning: Leading Edge

Functions	<ul style="list-style-type: none">• To vary the print start position in the sub scan direction for each of different paper types in Tray 1.
Use	<ul style="list-style-type: none">• The LPH Unit has been replaced.• The paper type has been changed.• The image on the copy deviates in the sub scan direction.• A faint image occurs on the leading edge of the image.
Adjustment Specification	<div><div></div><div><p>Width A on the test pattern produced should fall within the following range.</p><p>Specifications: 4.0 to 7.0 mm Setting Range: -3.0 mm to +3.0 mm (in 0.2 mm increments)</p></div></div>
Adjustment Instructions	<p>If width A is longer than the specifications, make the setting value smaller than the current one.</p> <p>If width A is shorter than the specifications, make the setting value greater than the current one.</p>
Adjustment Procedure	<ol style="list-style-type: none">1. Call the Service Mode to the screen.2. Touch "Machine" → "Printer Area" → "Print Positioning: Leading Edge."3. Select the "Plain Paper."4. Press the Start key to let the machine produce a test pattern.5. Check the dimension of width A on the test pattern.6. If width A falls outside the specified range, change the setting using the +/- key.7. Press the Start key to let the machine produce a test pattern.8. Check the dimension of width A on the test pattern.9. If width A is outside the specified range, change the setting again and make a check again.10. If width A falls within the specified range, touch "END."11. Following the same procedure, adjust for Thick 1 to 3, OHP Film, and Env.

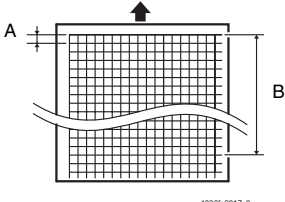
B. Print Positioning: Side Edge

Functions	<ul style="list-style-type: none"> To vary the print start position in the main scan direction for each paper source.
Use	<ul style="list-style-type: none"> The LPH Unit has been replaced. A paper feed unit has been added. The image on the copy deviates in the main scan direction.
Adjustment Specification	<div style="display: flex; align-items: center;"> <div style="flex: 1;">  <p style="text-align: center; font-size: small;">4036/s3010x0</p> </div> <div style="flex: 1; padding-left: 20px;"> <p>Width A on the test pattern produced should fall within the following range.</p> <p>Specifications: 3.0 ± 0.5 mm Setting Range: -3.0 mm to +3.0 mm (in 0.2 mm increments)</p> </div> </div>
Adjustment Instructions	<p>If width A is longer than the specifications, make the setting value smaller than the current one.</p> <p>If width A is shorter than the specifications, make the setting value greater than the current one.</p>
Adjustment Procedure	<ol style="list-style-type: none"> 1. Call the Service Mode to the screen. 2. Touch "Machine" → "Printer Area" → "Print Positioning: Side Edge." 3. Select the paper source to be adjusted. 4. Press the Start key to let the machine produce a test pattern. 5. Check the dimension of width A on the test pattern. 6. If width A falls outside the specified range, change the setting using the +/- key. 7. Press the Start key to let the machine produce a test pattern. 8. Check the dimension of width A on the test pattern. 9. If width A is outside the specified range, change the setting again and make a check again. 10. If width A falls within the specified range, touch "END." 11. Following the same procedure, adjust for all other paper sources. (Use A4 or 8 1/2 × 11 plain paper for the Bypass.)

C. Dup Print Positioning: Side Edge

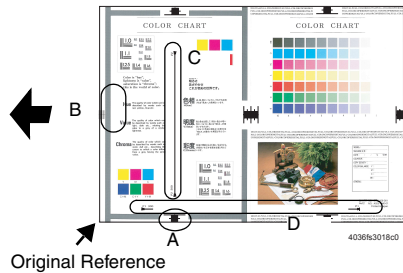
Functions	<ul style="list-style-type: none"> To vary the print position in the main scan direction for each paper source in the 2-Sided mode.
Use	<ul style="list-style-type: none"> The image on the backside of the 2-sided copy deviates in the main scan direction.
Adjustment Specification	<div style="display: flex; align-items: center;"> <div style="flex: 1;">  </div> <div style="flex: 1; padding-left: 20px;"> <ul style="list-style-type: none"> • Width A on the test pattern produced should fall within the following range. • For measurement, use the image produced on the backside of the test pattern. <p>Specifications: 3.0 ± 0.5 mm Setting Range: -3.0 mm to +3.0 mm (in 0.2 mm increments)</p> </div> </div>
Adjustment Instructions	<ul style="list-style-type: none"> • If width A is longer than the specifications, make the setting value smaller than the current one. • If width A is shorter than the specifications, make the setting value greater than the current one.
Adjustment Procedure	<ol style="list-style-type: none"> 1. Call the Service Mode to the screen. 2. Touch "Machine" → "Printer Area" → "Dup Print Positioning: Side Edge." 3. Select the paper source to be adjusted. 4. Press the Start key to let the machine produce a test pattern. 5. Check the dimension of width A on the test pattern. 6. If width A falls outside the specified range, change the setting using the +/- key. 7. Press the Start key to let the machine produce a test pattern. 8. Check the dimension of width A on the test pattern on the backside of the copy. 9. If width A is outside the specified range, change the setting again and make a check again. 10. If width A falls within the specified range, touch "END." 11. Following the same procedure, adjust for all other paper sources. (Use A4 or 8 1/2 × 11 plain paper for the Manual Bypass Tray.)

D. Paper Feed Direction Adj.

Functions	<ul style="list-style-type: none"> To synchronize the paper transport speed with the image writing speed.
Use	<ul style="list-style-type: none"> Feed Direction Adjustment becomes necessary. The image on the copy distorts (stretched, shrunk). When the image on the copy is stretched in the sub scan direction.
Adjustment Specification	<div>  <p>Width A and width B on the test pattern produced should fall within the following ranges. Width A: equivalent to one grid Width B: equivalent to 48 grids</p> <p>Specifications A: 7.9 to 8.3 B: 389.1 to 392.1</p> <p>Setting Range A, B: -10 to +10</p> </div>
Adjustment Instructions	<p>If width A or B is longer than the specifications, make the setting value smaller than the current one.</p> <p>If width A or B is shorter than the specifications, make the setting value greater than the current one.</p>
Adjustment Procedure	<ol style="list-style-type: none"> Load Tray 1 with A3 or 11 × 17 plain paper. Call the Service Mode to the screen. Touch these keys in this order: "Test Mode" → "Lattice Pattern." Select "Black," "SINGLE," "FEET," "CD Width:6," "FD Width:6," "Density:255," and "Normal." Press the Start key to let the machine produce a test pattern. Check width A (equivalent to one grid) and width B (equivalent to 48 grids) on the test pattern. Touch these keys in this order: "Machine" → "Printer Area" → "Paper Feed Direction Adj." If width of A or B falls outside the specified range, change the setting using the Up/Down keys. Press the Start key to let the machine produce a test pattern. Check width A and width B on the test pattern. If width A or B falls outside the specified range, change the setting value and make a check again. If width A or B falls within the specified range, touch "END." Following the same procedure, adjust for "Thick 1 to 3," "OHP Film," and "Env." (Check width A only for "OHP Film" and "Env.")

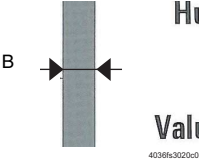
10.4.6 Scan Area

- Use the following Color Chart for the adjustment of the Scanner Section.
- If the Color Chart is not available, a scale may be used instead.

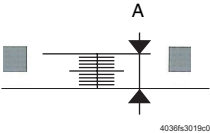


- A: Image Position: Side Edge
- B: Image Position: Leading Edge
- C: Cross Direction Adjustment
- D: Feed Direction Adjustment

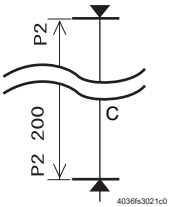
A. Image Position: Leading Edge

Functions	• To adjust variations in mounting accuracy and sensitivity of the Scanner Home Sensor and in mounting accuracy of the Original Width Scale by varying the scan start position in the main scan direction.	
Use	When the Original Glass is replaced. When the Original Width Scale is replaced.	
Adjustment Specification		<ul style="list-style-type: none">• Adjust so that width B on the sample copy made falls within the specified range.• An adjustment must have been completed correctly of "Print Positioning: Leading Edge" of Printer Area. <p>Specifications B: 7 ± 0.5 mm (10 ± 0.5 mm if a scale is used)</p> <p>Setting Range -5.0 to +5.0 (in 0.1 mm increments)</p>
Adjustment Instructions	If width B on the copy is less than 6.5 mm, increase the setting value. If width B on the copy is more than 7.5 mm, decrease the setting value.	
Adjustment Procedure	<ol style="list-style-type: none">1. Call the Service Mode to the screen.2. Touch these keys in this order: "Machine" → "Scan Area" → "Image Position: Leading Edge."3. Position the Color Chart correctly so that the original reference point is aligned with the scale.4. Press the Start key to make a copy.5. Check point B on the image of the copy.6. If width B on the copy falls outside the specified range, change the setting using the +/- key.7. Press the Start key to make another copy.8. Check the image on the copy to see if the specifications are met.9. Make adjustments until the specifications are met.	

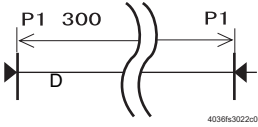
B. Image Position: Side Edge

Functions	<ul style="list-style-type: none"> To adjust part-to-part variations in accuracy of IR parts and their mounting accuracy by varying the scan start position in the main scan direction.
Use	<ul style="list-style-type: none"> When the CCD Unit is replaced. When the Original Glass is replaced. The Scanner Home Sensor has been replaced.
Adjustment Specification	<div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <ul style="list-style-type: none"> Adjust so that width A on the sample copy made falls within the specified range. An adjustment must have been completed correctly of "Print Positioning: Side Edge" of Printer Area. <p>Specifications A: 10 ± 1.0 mm</p> <p>Setting Range -10.0 to +10.0 (in 0.1 mm increments)</p> </div> </div>
Adjustment Instructions	<p>If the 0-mm position on the sample copy is on the right side of the correct 0-mm position perpendicularly to the feeding direction (less than -1 mm), decrease the setting.</p> <p>If the 0-mm position on the sample copy is on the left side of the correct 0-mm position perpendicularly to the feeding direction (exceeding 1 mm), increase the setting.</p>
Adjustment Procedure	<ol style="list-style-type: none"> Call the Service Mode to the screen. Touch these keys in this order: "Machine" → "Scan Area" → "Image Position: Side Edge." Position the Color Chart correctly so that the original reference point is aligned with the scale. Press the Start key to make a copy. Check point A on the image of the copy. If the image falls outside the specified range, change the setting using the +/- key. Press the Start key to make a copy. Check point A of the image on the copy to see if the specifications are met. Make adjustments until the specifications are met.

C. Cross Direction Adjustment

Functions	<ul style="list-style-type: none">To adjust the zoom ratio in the main scan direction for the Scanner Section
Use	<ul style="list-style-type: none">The CCD Unit has been replaced.
Adjustment Specification	<div></div> <ul style="list-style-type: none">Measure C width on the color chart and on the sample copy, and adjust the gap to be within the following specification.An adjustment must have been completed correctly of "Paper Feed Direction Adj." of Printer Area. <p>Specifications C: ± 1.0 mm</p> <p>Setting Range 0.990 to 1.010 (in 0.001 increments)</p>
Adjustment Instructions	<p>If the C width on the copy sample is less than one on color chart, increase the setting. If the C width on the copy sample exceeds one on color chart, decrease the setting.</p>
Adjustment Procedure	<ol style="list-style-type: none">Call the Service Mode to the screen.Touch these keys in this order: "Machine" → "Scan Area" → "Cross Direction Adjustment."Position the Color Chart correctly so that the original reference point is aligned with the scale.Press the Start key to make a copy.Check the C width on the image of the copy.If the image falls outside the specified range, change the setting using the +/- key.Press the Start key to make another copy.Check the image on the copy to see if the specifications are met.Make adjustments until the specifications are met.

D. Feed Direction Adjustment

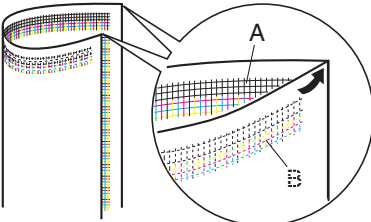
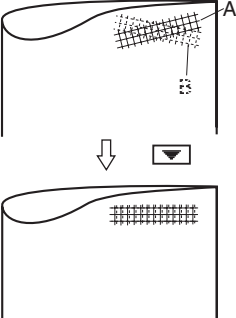
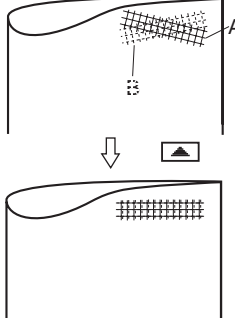
Functions	<ul style="list-style-type: none"> To adjust the zoom ratio in the sub scan direction for the Scanner Section
Use	<ul style="list-style-type: none"> The Scanner Assy has been replaced. The Scanner Motor has been replaced. The Scanner Drive Cables have been replaced.
Adjustment Specification	<div style="display: flex; align-items: center;">  <div style="margin-left: 20px;"> <ul style="list-style-type: none"> Measure D width on the color chart and on the sample copy, and adjust the gap to be within the following specification. An adjustment must have been completed correctly of "Paper Feed Direction Adj." of Printer Area. <p>Specifications D: ± 1.5 mm</p> <p>Setting Range 0.990 to 1.010 (in 0.001 increments)</p> </div> </div>
Adjustment Instructions	<p>If the D width on the copy sample is less than one on color chart, increase the setting. If the D width on the copy sample exceeds one on color chart, decrease the setting.</p>
Adjustment Procedure	<ol style="list-style-type: none"> Call the Service Mode to the screen. Touch these keys in this order: "Machine" → "Scan Area" → "Feed Direction Adjustment." Position the Color Chart correctly so that the original reference point is aligned with the scale. Press the Start key to make a copy. Check the D width on the image of the copy. If the image falls outside the specified range, change the setting using the +/- key. Press the Start key to make another copy. Check the image on the copy to see if the specifications are met. Make adjustments until the specifications are met.

10.4.7 Printer Resist Loop

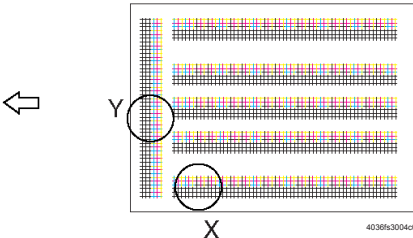
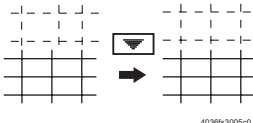
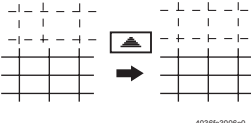
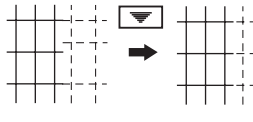
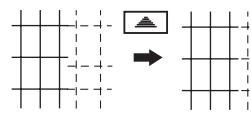
Functions	<ul style="list-style-type: none"> To set the correction value of the paper loop length for each process speed of Tray 1 to Tray 4, Bypass, and Duplex. To adjust the length of the loop formed in paper before the Registration Rollers. Use "Paper Passage" for paper passage check.
Use	<p>When a paper skew occurs. When a paper misfeed occurs.</p>
Adjustment Range	<p>Different setting ranges are set for different transport speeds.</p> <p>215 mm/s : -6 to +6 165 mm/s : -10 to +10 60 mm/s : -15 to +15</p>
Adjustment Procedure	<ol style="list-style-type: none"> Call the Service Mode to the screen. Touch these keys in this order: "Machine" → "Printer Resist Loop." Select the transport speed. Enter the new setting from the 10-Key Pad.

10.4.8 Color Registration Adjustment

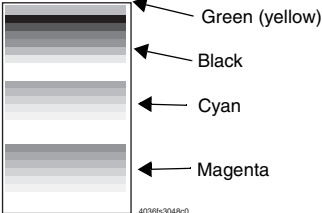
A. Black

Functions	<ul style="list-style-type: none">To correct black color shift, if it occurs with plain or thick paper.Make Color Registration Adjustment (cyan, magenta, and yellow) after this adjustment has been made.
Use	<ul style="list-style-type: none">To correct black color shift, if it occursThe LPH Assy (K) has been replaced.
Adjustment Range	"0" (-10 to +10 dot)
Adjustment Instructions	If the black reference line deviates in the direction of C, decrease the setting value. If the black reference line deviates in the direction of D, increase the setting value.
Adjustment Procedure	<ol style="list-style-type: none">Call the Service Mode to the screen.Touch these keys in this order: "Machine" → "Color Registration Adjustment."Load Tray 1 with A3 or A4 paper (plain or thick).Press the Start key.Fold the printed test pattern in half lengthwise to check for deviation (the image on the inside).Check deviation between black lines A and B.Select the paper type.Select black.Change the setting value using the +/- key as necessary.Produce another test pattern and check for deviation. <p>Check Procedure</p> <p>Check point A, B</p>  <p>40368s3001c0</p> <p>If the black reference line deviates in the direction of C, decrease the setting value. If the black reference line deviates in the direction of D, increase the setting value.</p> <p>Direction of C</p>  <p>40368s3002c0</p> <p>Direction of D</p>  <p>40368s3003c0</p>

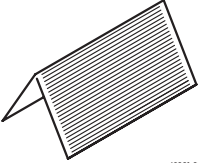
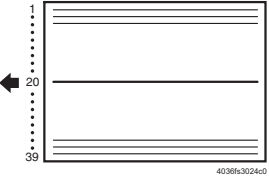
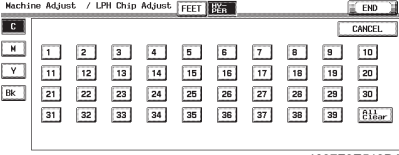
B. Cyan, Magenta, Yellow

Functions	<ul style="list-style-type: none"> To adjust color shift if there is any when comparing the original with copy of the plain or thick paper. Before making this adjustment, be sure to perform Color Registration Adjustment (Black).
Use	<ul style="list-style-type: none"> To correct any color shift
Adjustment Range	"0" (-6 to +6 dot)
Adjustment Instructions	<p>If the cross deviates in the direction of C, increase the setting. If the cross deviates in the direction of D, decrease the setting.</p>
Adjustment Procedure	<ol style="list-style-type: none"> 1. Call the Service Mode to the screen. 2. Touch these keys in this order: "Machine" → "Color Registration Adjustment." 3. Load Tray 1 with A3 or A4 paper (plain or thick). 4. Press the Start key. 5. On the test pattern produced, check for deviation between the black line and the line of each color at positions X and Y. 6. Select the paper type. 7. Select the color to be adjusted. 8. Using the +/- key, change the setting value as necessary. (At this time, only the line of the selected color moves.) 9. Produce another test pattern and make sure that there is no deviation. <p>Check Procedure</p> <p>Check point X, Y</p> <div style="display: flex; align-items: center; justify-content: center;">  </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;"> <p>Adjustment for X direction: Check point X</p> <p>Direction of C</p>  <p style="text-align: right; font-size: small;">4038fs3005c0</p> </div> <div style="width: 45%;"> <p>If the cross deviates in the direction of C, increase the setting. If the cross deviates in the direction of D, decrease the setting.</p> <p>Direction of D</p>  <p style="text-align: right; font-size: small;">4038fs3006c0</p> </div> </div> <div style="display: flex; justify-content: space-between; margin-top: 10px;"> <div style="width: 45%;"> <p>Adjustment for Y direction: Check point Y</p> <p>Direction of C</p>  <p style="text-align: right; font-size: small;">4038fs3007c0</p> </div> <div style="width: 45%;"> <p>If the cross deviates in the direction of C, increase the setting. If the cross deviates in the direction of D, decrease the setting.</p> <p>Direction of D</p>  <p style="text-align: right; font-size: small;">4038fs3008c0</p> </div> </div>

10.4.9 LPH Rank

Functions	<ul style="list-style-type: none">To correct uneven LPH image by producing an output of the LPH Pattern of Test Print
Use	<ul style="list-style-type: none">When an uneven image occurs and is not eliminated even after other troubleshooting procedures have been carried out.When the LPH Unit has been replacedWhen the LPH Assy has been replaced
Adjustment Range	<p>“1” (1 to 5) * 0 is not used.</p>
Adjustment Procedure	<p>1. Load Tray 1 with A3 plain paper. 2. Call the Service Mode to the screen. 3. Touch “Machine” → “LPH Rank.” 4. Return the Rank settings for all four colors back to “1.” 5. Press the Start key to let the machine produce a test pattern.</p> <p>LPH Pattern</p>  <p>6. Identify the spot, at which uneven image occurs. 7. Select the color (Cyan, Magenta, Yellow, Black) that develops uneven image. * Select Yellow if green on the test pattern develops uneven image. 8. Using the 10-Key Pad, enter a value of the Rank value shown on the screen plus one. * If Rank is “1,” enter 2. * If “0” is set for Rank, set “1.” Do not use “0.” 9. Let the machine produce another test pattern and check for uneven image. 10.Repeat steps 1 through 8 until the uneven image is gone.</p>

10.4.10 LPH Chip Adjust

Functions	<ul style="list-style-type: none"> To correct chips of locations where sub scan direction white lines or black lines occur in the LPH Pattern produced using "Test Print."
Use	<ul style="list-style-type: none"> White line or color line or black line occurs in the sub scan direction. The LPH Assy has been replaced. The LPH Unit has been replaced.
Adjustment Procedure	<ol style="list-style-type: none"> Call the Service Mode to the screen. Touch these keys in this order: "Test Mode" → "LPH Pattern." Select "SINGLE," "HYPER," "Gradation," and "Border Line: ON." Press the Start key to let the machine produce a test pattern. Check the test pattern for the location, at which white lines or color or black lines in sub scan direction occur. Touch these keys in this order: "Machine" → "LPH Chip Adjust." <div style="text-align: center;">  <p>40396a3023c0</p> </div> <ol style="list-style-type: none"> Fold the test pattern in half. (with the pattern face on the outside) <ol style="list-style-type: none"> The chip boundary line on the crease (the center) of the test pattern corresponds to "20" on the panel. Starting here count out to each side of the paper to identify each location <div style="display: flex; justify-content: space-around; align-items: flex-end;"> <div style="text-align: center;">  <p>40396a3024c0</p> </div> <div style="text-align: center;">  <p>4037F3E513DA</p> </div> </div> <ol style="list-style-type: none"> Find the number on the panel, to which the location of white lines or black lines in sub scan direction checked in step 5 corresponds. Select the color (C, M, Y, or K) in which white lines or black lines in sub scan direction occur. <p>* If the lines occur only in green on the test pattern, select Y.</p> <ol style="list-style-type: none"> Touch the corresponding number on the panel. (It is then highlighted and the setting value is displayed besides the highlighted number.) Change the setting value using the 10-Key Pad. <p>* When a new LPH Unit has been installed, corrections can be made for up to eight locations.</p> <p>* Corrections for up to five locations can be made through factory adjustments. If white lines or black lines in sub scan direction occur, therefore, corrections can therefore be made in the field for three to eight locations.</p> <ol style="list-style-type: none"> Select HYPER and color. Press the Start key to let the machine produce a test pattern and check for lines.

10.4.11 Manual Bypass Tray Adjustment

Functions	<ul style="list-style-type: none"> To set the maximum width and the minimum width for the Manual Bypass Paper Size Unit of the Manual Bypass Guide
Use	<ul style="list-style-type: none"> Use when the Manual Bypass Paper Size Unit of the Manual Bypass Guide has been changed. Use when a false paper size is displayed when the manual Bypass is used.
Adjustment Procedure	<ol style="list-style-type: none"> 1. Call the Service Mode to the screen. 2. Touch these keys in this order: "Machine" → "Manual Bypass Tray Adjustment" 3. Touch "Max. Width." 4. Load the Bypass Tray with paper having a width of 301 mm. 5. Press the Start key and check that the results are OK. 6. Touch "Min. Width." 7. Load the Bypass Tray with paper having a width of 89 mm. 8. Press the Start key and check that the results are OK. <p>* Make the adjustment again if the results are NG.</p>

10.4.12 Lead Edge Erase Adjustment

Functions	<ul style="list-style-type: none"> To set the leading edge erase amount of the paper.
Use	<ul style="list-style-type: none"> To change the width of the area not printed along the leading edge of the paper
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is 4 mm. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> "4 mm" 5 mm 7 mm </div>

10.4.13 Cooling Fan Speed

Functions	<ul style="list-style-type: none"> To set the Cooling Fan Speed.
Use	<ul style="list-style-type: none"> Use when operating the Paper Cooling Fan Motor at full speed regardless of the paper type. <p style="margin-left: 40px;">Mode1: When the system speed is 60 mm/s (using the gloss paper or paper type other than plain paper), rotate the fan at half speed. When the system speed is 215 mm/sec or 165 mm/sec, rotate the fan at full speed.</p> <p style="margin-left: 40px;">Mode2: The fan will be operated at full speed regardless of the system speed.</p>
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is Mode1. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> "Mode1" Mode2 </div>

10.5 Firmware Version

Functions	<ul style="list-style-type: none"> To check the Firmware version.
Use	<ul style="list-style-type: none"> Use when the firmware is upgraded. When the firmware is upgraded or PWB is replaced.
Adjustment Procedure	<ol style="list-style-type: none"> 1. Call the Service Mode to the screen. 2. Touch "Firmware Version." 3. Select the appropriate key from 1 to 3 to check the Firmware Version.

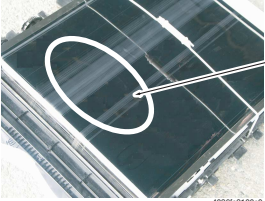

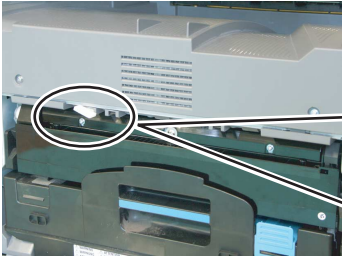

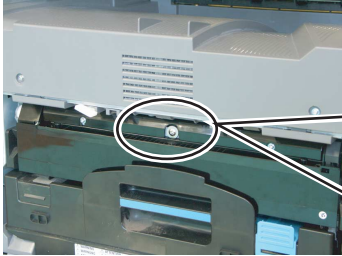
10.6 Imaging Process Adjustment

10.6.1 Gradation Adjust

Functions	<ul style="list-style-type: none"> To make an automatic adjustment of gradation based on the test pattern produced and the readings taken by the Scanner
Use	<ul style="list-style-type: none"> Color reproduction performance becomes poor. The IU has been replaced. The Image Transfer Belt Unit has been replaced. * The Adj. Values of Max. and Highlight shown on the Gradation Adjust screen represent how much corrections are made to produce an ideal image output. Conv. Value shows the difference from the ideal image density. * The closer the Conv. Value to 0, the more ideal the image. Gradation Mode : It gives the highest priority to gradation performance of the image as it adjusts. Resolution Mode : It gives the highest priority to reproduction performance of letters and lines as it adjusts. High Compression Mode : It gives the highest priority to increasing the number of images to be stored in the memory as it adjusts.
Adjustment Specification	<p>Max : 0 ± 100 Highlight : 0 ± 60</p>
Adjustment Procedure	<ol style="list-style-type: none"> 1. Touch "Gradation Adjust." 2. Select the appropriate mode for the gradation adjustment. 3. Press the Start key to let the machine produce a test pattern. 4. Place the test pattern produced on the Original Glass. 5. Place ten blank sheets of A3 paper on the test pattern and lower the Original Cover. 6. Press the Start key. (The machine will then start scanning the test pattern.) 7. Touch "OK" and repeat steps from 2 through 6 twice (a total of three times). 8. Touch "Gradation Adjust" to display the Adj. Values and Conv. Values of each color (C, M, Y and K) for Max and Highlight. 9. Use the following procedures to check the Conv. Value. <p>Max: 0 ± 100 and Highlight: 0 ± 60: It completes the adjustment procedure. If neither Max nor Highlight falls outside the ranges specified above: Perform steps from 2 to 6.</p> <ul style="list-style-type: none"> If a fault is detected, "0" is displayed for all values. In this case, turn OFF and ON the Main Power Switch and perform Gradation Adjust once again. If either Max or Highlight still remains outside the specified ranges perform D Max Density. If a total of four sequences of Gradation Adjust do not bring the values into the specified range, check the image. If the image is faulty, perform the troubleshooting procedures for image problems.

10.6.2 Transfer Belt

A. Refresh

Functions	<ul style="list-style-type: none">To turn the Transfer Belt idly
Use	<ul style="list-style-type: none">To refresh the surface of the Transfer Belt when filming occurs on the Transfer Belt. <div><p>Filming</p><p>40366s3100c0</p></div>
Setting/ Procedure	<div><p>1. From the Service mode, enter the Transfer Belt Refresh mode.</p><p>2. Open the Left Door and, using the Safety Switch Holding Jig, turn ON the Left Door Switch.</p><div><p>Safety Switch Holding Jig</p></div><p>3. Wait until predrive is completed.</p><p>4. Loosen one screw completely and press the Belt Refresh Pad up against the Transfer Belt.</p><div><p>Screw</p></div><p>5. Press the Start key.</p><p>6. After about 5 min., the Transfer Belt refresh sequence will be completed.</p><p>7. Remove the Safety Switch Holding Jig.</p><p>8. Tighten one screw and retract the Belt Refresh Pad from the Transfer Belt.</p></div>

10.6.3 Cleaning Bias

Functions	• To set the strength of the Transfer Belt cleaning bias											
Use	<div>• When the image pattern is not completely removed, it strengthen the Transfer Belt cleaning bias in order to make the cleaner more effective.</div> <div>Print : To set the cleaning bias value for printing.</div> <div>Not Print : To set the cleaning bias value in situations such as being recovered from the paper jam, carrying out the image stabilization, or cleaning the 2nd image transfer roller.</div> <div>• The strength of the bias increases as changing the mode as follows. Mode1 → Mode2 → Mode3 → Mode4</div>											
Setting/ Procedure	<div><Print></div> <div>• The default setting is Mode1.</div> <table><tr><td>“Mode1”</td><td>Mode2</td><td>Mode3</td><td>Mode4</td></tr></table> <div><Not Print></div> <div>• The default setting is Mode1.</div> <table><tr><td>“Mode1”</td><td>Mode2</td><td>Mode3</td><td>Mode4</td></tr></table>				“Mode1”	Mode2	Mode3	Mode4	“Mode1”	Mode2	Mode3	Mode4
“Mode1”	Mode2	Mode3	Mode4									
“Mode1”	Mode2	Mode3	Mode4									

10.6.4 Auto Cleaning

Functions	<ul style="list-style-type: none">To carry out a 1-min. cleaning sequence for every 1,000 printed pages (sub scan direction: 216 mm or less) after the power has been turned ON		
Use	<ul style="list-style-type: none">To select "Disable" for Transfer Belt Auto Cleaning if the wait time of 1-min. cleaning sequence is to be eliminated		
Setting/ Procedure	<ul style="list-style-type: none">The default setting is Enable. <table><tr><td>"Enable"</td><td>Disable</td></tr></table>	"Enable"	Disable
"Enable"	Disable		

10.6.5 IDC Table Revive

Functions	<ul style="list-style-type: none">To set the upper limit value of Vdc during the execution of the image stabilization sequence, thereby preventing part of the Photo Conductor surface from being left uncleaned due to filming		
Use	<ul style="list-style-type: none">To select "Disable" for IDC Table Correction if a higher density image is desired		
Setting/ Procedure	<ul style="list-style-type: none">The default setting is Enable. <table><tr><td>"Enable"</td><td>Disable</td></tr></table> <ul style="list-style-type: none">Enable: Sets the upper limit value for VdcDisable: Does not set the upper limit value for Vdc	"Enable"	Disable
"Enable"	Disable		

10.6.6 D Max Density

Functions	<ul style="list-style-type: none"> To adjust gradation, color, and image density to target reproduction levels by varying the maximum amount of toner sticking to paper through auxiliary manual fine-adjustment of gamma of each color after Gradation Adjust.
Use	<ul style="list-style-type: none"> An image quality problem is not corrected even after Gradation Adjust has been run.
Adjustment Range	"0" (-10 to +10)
Adjustment Instructions	To increase the maximum amount of toner sticking, increase the setting value. To decrease the maximum amount of toner sticking, decrease the setting value.
Adjustment Procedure	<ol style="list-style-type: none"> 1. Call the Service Mode to the screen. 2. Touch these keys in this order: "Imaging Process Adjustment" → "D Max Density." 3. Select "COPY" or "Printer." 4. Select the color to be adjusted. 5. Enter the new setting from the 10-Key Pad. 6. Touch "END" to return to the "Process" menu screen. 7. Touch "Stabilizer." 8. Touch "Stabilizer Mode." 9. Press the Start key to validate the adjustment value. 10. Check the copy image for any image problem. <p>NOTE</p> <ul style="list-style-type: none"> If the setting value has been changed, be sure to run an image stabilization sequence to make valid the new value.

10.6.7 TCR Level Setting

Functions	<ul style="list-style-type: none"> To adjust the T/C control level when an abnormal image density occurs as a result of a change in the amount of charge of toner and carrier due to an environmental change.
Use	<ul style="list-style-type: none"> Use when T/C changes due to changes in environmental conditions of the user site
Adjustment Range	"0" (-3 to +3) The central value of 0 corresponds to 7 % of T/C (in 1.0 % increments).
Adjustment Instructions	To increase T/C, increase the setting value. To decrease T/C, decrease the setting value.
Adjustment Procedure	<ol style="list-style-type: none"> 1. Call the Service Mode to the screen. 2. Touch these keys in this order: "Process" → "TCR Level Setting." 3. Select the color to be adjusted. 4. Enter the new setting from the 10-Key Pad. 5. Touch "END" to validate the adjustment value. 6. Check the copy image for any image problem.

10.6.8 Background Voltage Margin

Functions	<ul style="list-style-type: none"> To adjust the highlight portion (fog level) to the target reproduction level by making an auxiliary manual fine-adjustment of γ of each color after Gradation Adjust.
Use	<ul style="list-style-type: none"> Use when a foggy background occurs due to a printer problem
Adjustment Range	"0" (-5 to +5)
Adjustment Instructions	<p>To make the background level foggier, increase the setting value. To make the background level less foggy, decrease the setting value.</p>
Adjustment Procedure	<ol style="list-style-type: none"> 1. Call the Service Mode to the screen. 2. Touch these keys in this order: "Imaging Process Adjustment" → "Background Voltage Margin." 3. Select the color to be adjusted. 4. Enter the new setting from the 10-Key Pad. 5. Touch "END" to return to the "Image Adjust" menu screen. 6. Touch "Stabilizer." 7. Touch "Stabilization Only." 8. Press the Start key to validate the adjustment value. 9. Check the copy image for any image problem. <p>NOTE</p> <ul style="list-style-type: none"> If the setting value has been changed, be sure to run an image stabilization sequence to make valid the new value.

10.6.9 Transfer Adjust

A. 2nd Transfer Adjust

Functions	<ul style="list-style-type: none"> Adjust the 2nd image transfer output (ATVC) on the 1st page and the 2nd page for each paper type.
Use	<ul style="list-style-type: none"> To use when the transfer failure at the trailing edge occurs.
Adjustment Range	"0" (-5 to +5)
Adjustment Instructions	<p>To increase the ATVC value (in the direction of a foggier image), decrease the setting value. To decrease the ATVC value (in the direction of a less foggy image), increase the setting value.</p>
Adjustment Procedure	<ol style="list-style-type: none"> 1. Call the Service Mode to the screen. 2. Touch these keys in this order: "Imaging Process Adjustment" → "Transfer Adjust." 3. Select the side of the image (First side or Second side), on which the transfer failure at the trailing edge occurs. 4. Select the paper type with the transfer failure at the trailing edge. 5. Enter the new setting from the 10-Key Pad. 6. Touch "END" to validate the adjustment value. 7. Check the copy image for any image problem.

B. 1st Transfer Adjust

Functions	<ul style="list-style-type: none"> Adjust the output value for the 1st image transfer voltage.
Use	<ul style="list-style-type: none"> To use when white spots appeared.
Adjustment Range	"0" (-5 to +5)
Adjustment Instructions	Adjust the output value for the 1st image transfer voltage by; Increasing it: Increase the setting value (white spots will decrease) Decreasing it: Decrease the setting value
Adjustment Procedure	<ol style="list-style-type: none"> Call the Service Mode to the screen. Select "Test Mode" → "Halftone Pattern" to output the red or green test pattern. When the test pattern image has white spots, adjust with the following procedure. Touch these keys in this order: "Imaging Process Adjustment" → "Transfer Adjust." Select color/black. Change the setting value using the 10-Key Pad. Touch "OK" key to set the adjustment value. <p>Gradually increase the adjustment value to the acceptable white spots level while checking the test pattern.</p> <p>NOTE</p> <ul style="list-style-type: none"> PC Drum memory (94mm pitch) may occur by taking measure to white spots occurred by increasing the 1st image transfer voltage to adjust it. Check the image on the test print or the color chart when adjusting. The value for the 1st image transfer adjustment will be reset when the new transfer belt unit is detected. The value will be 0.

10.6.10 Stabilizer

A. Stabilization Only

Functions	<ul style="list-style-type: none"> The image stabilization sequence is carried out without clearing the historical data of image stabilization control.
Use	<ul style="list-style-type: none"> Use if an image problem persists even after Gradation Adjustment has been executed. When D Max Density and Background Voltage Margin of Service mode are changed.
Adjustment Procedure	<ol style="list-style-type: none"> Call the Service Mode to the screen. Touch these keys in this order: "Imaging Process Adjustment" → "Stabilization Only." Press the Start key to start Stabilizer. The Start key turns orange and stays lit up orange during the Stabilizer sequence. Stabilizer is completed when the Start key turns green.

B. Initialize+Image Stabilization

Functions	<ul style="list-style-type: none"> To carry out an image stabilization sequence after the historical data of image stabilization control has been initialized.
Use	<ul style="list-style-type: none"> Use if an image problem persists even after Gradation Adjustment has been executed. Use if tone reproduction and maximum density are faulty even after Stabilizer Mode has been executed.
Adjustment Procedure	<ol style="list-style-type: none"> Call the Service Mode to the screen. Touch these keys in this order: "Imaging Process Adjustment" → "Initialize+Image Stabilization." Press the Start key to start Stabilizer. The Start key turns orange and stays lit up orange during the Stabilizer sequence. Stabilizer is completed when the Start key turns green.

10.6.11 Thick Paper Density Adjustment

Functions	<ul style="list-style-type: none"> To fine-adjust density of printed images of each color for thick paper and OHP transparencies.
Use	<ul style="list-style-type: none"> To change the density of the printed image for each color with thick paper and OHP transparencies
Adjustment Range	<ul style="list-style-type: none"> The fine-adjustment can be made over a range of a total of five steps, two darker levels and two lighter levels around the standard central level.
Adjustment Instructions	Light color: Touch the Darker key. Dark color: Touch the Lighter key.
Adjustment Procedure	<ol style="list-style-type: none"> Call the Service Mode to the screen. Touch these keys in this order: "Imaging Process Adjustment" → "Thick Paper Density Adjustment." Touch the Lighter or Darker key for the desired color to correct the image density.

10.6.12 Thin Paper Duplex Mode

Functions	<ul style="list-style-type: none"> Turn this function ON when thin paper (64 g/m²) is used in an ambience of high temperature and high humidity in the 2-sided mode. It decreases the transfer output value so as to prevent a paper misfeed from occurring.
Use	<ul style="list-style-type: none"> Use when a paper misfeed occurs when thin paper is used.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is OFF. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> ON "OFF" </div>

10.6.13 TCR Toner Supply

Functions	<ul style="list-style-type: none"> To adjust the set T/C level by replenishing an auxiliary supply of toner when a low ID occurs due to a lowered T/C after large numbers of copies have been made of originals having a high image density.
Use	<ul style="list-style-type: none"> When there is a drop in T/C.
Adjustment Procedure	<ol style="list-style-type: none"> Call the Service Mode to the screen. Touch these keys in this order: "Imaging Process Adjustment" → "TCR Toner Supply." Select the color, for which supply of toner is to be replenished. Pressing the Start key will let the machine detect the current toner density and; if the density is lower than a reference value, a toner replenishing sequence and then a developer agitation sequence are run. These sequences are repeated up to a maximum of four times until the toner density reaches the reference value. If the toner density is found to be higher than the reference value, only a developer agitation sequence is carried out.

10.6.14 Monochrome Density Adjustment

Functions	<ul style="list-style-type: none">To fine-adjust the density of the printed image for a black copy
Use	<ul style="list-style-type: none">To vary the density of the printed image of a black copy
Adjustment Range	Lighter (2 steps), "Std", Darker (2 steps)
Adjustment Instructions	If the black is light, touch the Darker key. If the black is dark, touch the Lighter key.
Adjustment Procedure	1. Call the Service Mode to the screen. 2. Touch these keys in this order: "Imaging Process Adjustment" → "Monochrome Density Adjustment." 3. Touch the Lighter or Darker key as necessary to correct the image density.

10.6.15 Dev. Bias Choice

Functions	<ul style="list-style-type: none">To change the setting of the developing bias voltageWhen this function is turned ON, it decreases the developing bias voltage, thereby preventing voltage leak from occurring.
Use	<ul style="list-style-type: none">Use when patches of white occur in the image in an ambience of low atmospheric pressure, such as in high altitudes.
Setting/ Procedure	<ul style="list-style-type: none">The default setting is OFF. <div>ON"OFF"</div>


10.7 CS Remote Care





10.7.1 Outlines






- CS Remote Care enables the machine and the computer at CS Remote Care center to exchange data through telephone line in order to control the machine.
- CS Remote Care enables the machine to call the computer at the center when trouble occurs. It also enables the computer at the center to contact the machine for the necessary data.
- Data which CS Remote Care handles can be divided into the following groups.
 - a. Data which show the status of use of the machine such as Total count, PM count.
 - b. Data which show the abnormal situation on the machine such as where and how often errors occur.
 - c. Data on adjustment
 - d. Data on setting

10.7.2 Setting Up the CS Remote Care

NOTE

- **For resetting up the machine which CS Remote Care has already been set up, clear the RAM for CS Remote Care before resetting.**
 **For clearing the RAM, see 257.**
- **When using the telephone line for connection, use the recommended modem. (For recommended modem, contact responsible person of Develop.)**

Step	Procedure
0	Register the device ID to the application at CS Remote Care Center. The initial connection is not available unless the device ID is registered.
1	Connecting the modem Turn the power for the modem OFF. Connect the machine and the modem with a modem cable. Connect the modem and the wall jack with a modular cable. * For connecting the modular cable, see the manual for the modem.
2	Clearing the RAM 1. Select Service Mode → CS Remove Care, and touch "Detail Setting" key. 2. Touch "RAM Clear" key. 3. Select Set, and touch "OK."  257 NOTE • When Detail Setting key is not displayed, skip this step and proceed to Step 3.
3	Selecting the CS Remote Care function Select Service Mode → CS Remove Care → System Selection, and touch "Modem" key.
4	Inputting the ID Code 1. Select Service Mode → CS Remote Care → ID Code, and touch "ID Code" key. 2. Input the seven digits ID of the service person, and touch "ID Code" key again.  256
5	Setting the date and time for CS Remote Care 1. Select Service Mode → CS Remote Care, and touch "Detail Setting" key. 2. Touch "Date & Time Setting" key. 3. Input the date, time and the time zone using the 10-Key Pad, and touch "Set" key.  257
6	Setting the Center ID 1. Select Service Mode → CS Remote Care, and touch "Detail Setting" key. 2. Touch Machine Setting → Center ID, and input the Center ID (five digits).  257

Step	Procedure
7	<p>Setting the Device ID</p> <ol style="list-style-type: none"> 1. Select Service Mode → CS Remote Care, and touch "Detail Setting" key. 2. Touch Machine Setting → Device ID, and input Device ID (nine digits). <p> 257</p>
8	<p>Setting the telephone number of the Center</p> <ol style="list-style-type: none"> 1. Select Service Mode → CS Remote Care, and touch "Detail Setting" key. 2. Touch Machine Setting → Center Telephone Number key. 3. Input the telephone number of the Center using the 10-Keys Pad and P, T, W, - keys. <p> 257</p>
9	<p>Inputting the Device telephone number</p> <ol style="list-style-type: none"> 1. Select Service Mode → CS Remote Care, and touch "Detail Setting" key. 2. Touch Machine Setting → Device Telephone Number key. 3. Input the Device telephone number using the 10-Key Pad and P, T, W, - keys. <p> 257</p>
10	<p>Inputting the AT command for initializing the modem</p> <ol style="list-style-type: none"> 1. Select Service Mode → CS Remote Care → and touch "Detail Setting" key. 2. Touch "AT Command" key. 3. Input AT Command. <p>NOTE</p> <ul style="list-style-type: none"> • Change this Command only when it is necessary. (They do not need to be changed in normal condition.) • For details on AT Command, see the manual for the modem. <p> 258</p>
11	<p>Setting the DIPSW for CS Remote Care</p> <p>NOTE</p> <ul style="list-style-type: none"> • This setting is not normally necessary. Take this step only when necessary in a specific connecting condition.
12	<p>Executing the initial transmission</p> <ol style="list-style-type: none"> 1. Select Service Mode → CS Remote Care, and touch "Detail Setting" key. 2. Touch "initial transmission" key on the right bottom of the screen to start initial transmission. 3. When the machine is properly connected with the Center, CS Remote Care setting screen will be displayed. <p>NOTE</p> <ul style="list-style-type: none"> • The initial transmission key at the right bottom of the screen will be displayed only when the Center ID, the Device ID, Telephone number of the Center and the Device telephone number have been input. <p> 256</p>

10.7.3 Software SW setting for CS Remote Care

NOTE

- **SW bits data are written into the NVRAM every time a change is made. In case you changed bit data by accident, be sure to restore the previous state.**

A. Input procedure

1. Select Service Mode → “CS Remote Care” → “Detail Setting”, and touch “Software Switch Setting” key.
2. Touch “Switch No.” key, and input the SW number (two digits) using the 10-Key Pad.
3. Touch “Bit Assignment”, and select SW bit number using the arrow keys, and input 0 or 1 using the 10-Key Pad.
(For setting by hexadecimal numbers, touch “HEX Assignment” key, and input using the 1-Key Pad or A to F keys.)
4. Touch “Fix” key.

NOTE

- **About functions of each switch, see to “B.List of software SW for CS Remote Care.”**

B. List of software SW for CS Remote Care

NOTE

- **Do not change any bit not described on this table.**

SW No.	Bit	Functions	0	1	Default
SW 01	0	Dial Mode	Pulse	Tone	1
	1	Line for send only	No	Yes	0
	2	Reservation	—	—	0
	3	Reservation	—	—	0
	4	Baud rate	*1	*1	0
	5		*1	*1	0
	6		*1	*1	0
	7		*1	*1	1
SW 02	0	Auto call on SC occurrence	Do not call	Call	1
	1	Auto call on date specification	Do not call	Call	1
	2	Auto call on the part replacement	Do not call	Call	1
	3	Auto call on the drum replacement	Do not call	Call	1
	4	Auto call on the periodic maintenance (PM)	Do not call	Call	1
	5	Auto call on the IU Life	Do not call	Call	1
	6	Auto call of the IR shortage	Do not call	Call	1
	7	Auto call on the zero reset of the fixed parts replacement.	Do not call	Call	1
SW 03	0	Reservation	—	—	0
	1	Auto call on the toner supply	Do not call	Call	1
	2	Reservation	—	—	0
	3	Auto call on the waste toner bottle full	Do not call	Call	1
	4 to 7	Reservation	—	—	0
SW 04	0 to 7	Reservation	—	—	0

SW No.	Bit	Functions	0	1	Default
SW 05	0	Modem redial interval	*2	*2	1
	1		*2	*2	1
	2		*2	*2	0
	3		*2	*2	0
	4 to 7	Reservation	—	—	0
SW 06	0	Modem redial times	*3	*3	0
	1		*3	*3	1
	2		*3	*3	0
	3		*3	*3	1
	4		*3	*3	0
	5		*3	*3	0
	6		*3	*3	0
	7	Reservation	—	—	0
SW 07	0	Redial for response time out	Do not redial	Redial	1
	1 to 7	Reserved	—	—	0
SW 08	0	Retransmission interval on E-Mail delivery error	*4	*4	0
	1		*4	*4	1
	2		*4	*4	1
	3		*4	*4	0
	4 to 7	Reservation	—	—	0
SW 09	0	Retransmission times on E-Mail delivery error	*5	*5	0
	1		*5	*5	1
	2		*5	*5	0
	3		*5	*5	1
	4		*5	*5	0
	5		*5	*5	0
	6		*5	*5	0
	7	Reservation	—	—	0
SW 10	0 to 7	Reservation	—	—	0
SW 11	0	Timer 1 RING reception → CONNECT reception	*6	*6	0
	1		*6	*6	0
	2		*6	*6	0
	3		*6	*6	0
	4		*6	*6	0
	5		*6	*6	1
	6		*6	*6	0
	7		*6	*6	0

SW No.	Bit	Functions	0	1	Default
SW 12	0	Timer 2	*7	*7	0
	1	Dial request completed → CONNECT reception	*7	*7	0
	2		*7	*7	0
	3		*7	*7	0
	4		*7	*7	0
	5		*7	*7	0
	6		*7	*7	1
	7		*7	*7	0
SW 13	0 to 7	Reservation	—	—	0
SW 14	0	Timer 4	*8	*8	0
	1	Line connection → Start request telegram delivery	*8	*8	0
	2		*8	*8	0
	3		*8	*8	0
	4		*8	*8	0
	5		*8	*8	1
	6		*8	*8	0
	7		*8	*8	0
SW 15	0	Timer 5	*9	*9	0
	1	Wait time for other side's response	*9	*9	1
	2		*9	*9	1
	3		*9	*9	1
	4		*9	*9	1
	5		*9	*9	0
	6		*9	*9	0
	7		*9	*9	0
SW 16	0 to 7	Reservation	—	—	0
SW 17	0 to 7	Reservation	—	—	0
SW 18	0	Attention display	Do not call	Call	1
	1 to 7	Reservation	—	—	0
SW 19 to SW 40	0 to 7	Reservation	—	—	0

*1: Baud rate

Mode	01-7	01-6	01-5	01-4
9600 bps	0	1	1	0
19200 bps	0	1	1	1
"38400 bps"	1	0	0	0

*2: Modem redial interval

Mode	05-3	05-2	05-1	05-0
1 minute	0	0	0	1
2 minutes	0	0	1	0
"3 minutes"	0	0	1	1
4 minutes	0	1	0	0
5 minutes	0	1	0	1
6 minutes	0	1	1	0
7 minutes	0	1	1	1
8 minutes	1	0	0	0
9 minutes	1	0	0	1
10 minutes	1	0	1	0

*3: Modem redial times

Mode	06-6	06-5	06-4	06-3	06-2	06-1	06-0
0 to 9 times	000 0000 to 000 1001						
"10 times"	0	0	0	1	0	1	0
11 to 99 times	000 1011 to 110 0011						

*4: Retransmission interval on E-Mail delivery error

Mode	08-3	08-2	08-1	08-0
0 minute	0	0	0	0
10 minutes	0	0	0	1
20 minutes	0	0	1	0
30 minutes	0	0	1	1
40 minutes	0	1	0	0
50 minutes	0	1	0	1
"60 minutes"	0	1	1	0
70 minutes	0	1	1	1
80 minutes	1	0	0	0
90 minutes	1	0	0	1
100 minutes	1	0	1	0
110 minutes	1	0	1	1
120 minutes	1	1	0	0

*5: Retransmission times on E-Mail delivery error

Mode	09-6	09-5	09-4	09-3	09-2	09-1	09-0
0 to 9 times	000 0000 to 000 1001						
"10 times"	0	0	0	1	0	1	0
11 to 99 times	000 1011 to 110 0011						

*6: Timer 1 (RING reception → CONNECT reception)

Mode	11-7	11-6	11-5	11-4	11-3	11-2	11-1	11-0
0 to 31 sec	0000 0000 to 0001 1111							
"32 sec"	0	0	1	0	0	0	0	0
33 to 255 sec	0010 0001 to 1111 1111							

*7: Timer 2 (Dial request completed → CONNECT reception)

Mode	12-7	12-6	12-5	12-4	12-3	12-2	12-1	12-0
0 to 63 sec	0000 0000 to 0011 1111							
"64 sec"	0	1	0	0	0	0	0	0
65 to 255 sec	0100 0001 to 1111 1111							

*8: Timer 4 (Line connection → Start request telegram delivery)

Mode	14-7	14-6	14-5	14-4	14-3	14-2	14-1	14-0
0 to 31 (x 100 msec)	0000 0000 to 0001 1111							
"32 (x 100 msec)"	0	0	1	0	0	0	0	0
33 to 255 (x 100 msec)	0010 0001 to 1111 1111							

*9: Timer 5 (Wait time for other side's response)

Mode	15-7	15-6	15-5	15-4	15-3	15-2	15-1	15-0
0 to 29 sec	0000 0000 to 0001 1101							
"30 sec"	0	0	0	1	1	1	1	0
31 to 255 sec	0001 1111 to 1111 1111							

10.7.4 Setup confirmation

- **Follow the steps below to make sure that CS Remote Care has been properly set up.**
 1. Call the Service Mode to the screen.
 2. Touch “CS Remote Care” key.
 3. Check to make sure that only selected item is displayed.

10.7.5 Calling the Maintenance

- When CE starts maintenance, inputting the ID code of CE (seven digits: numbers which CE can identify. They are controlled by the distributor.) will transmit the information to the Center side and tells that the maintenance has started. When the maintenance is finished, touching “Maintenance Complete” key will transmit the information to the Center and tells that it is finished.

A. When starting the Maintenance

1. Select Service Mode and touch “CS Remote Care” key.
2. Touch “ID Code” key, and input ID Code.
3. Touch “ID Code” key.

* The Start key blinks while maintenance is being carried out.

B. When finishing the Maintenance

1. Select Service Mode and touch “CS Remote Care” key.
2. Touch “Maintenance Complete” key.

10.7.6 Calling the Center from the Administrator

- When the CS Remote Care setup is complete, the administrator can call the CS Remote Care center.
 1. Select “Administrator Setting”, and touch “System Connection” key.
 2. Touch “Admin. transmission” key.
 3. Press the Start key.When the setup is not complete or another transmission is being carried out, the Admin. transmission key will not be displayed, and the transmission is not available.

NOTE

- **For transmitting data of the machine by calling the center on the specified date and time, refer to the manual for CS Remote Care Center.**

10.7.7 Checking the transmission log

- The transmission log list will be output to be checked.
 1. Select Service Mode → “CS Remote Care”, and touch “Detail setting” key.
 2. Touch “Communication Log Print” key.
 3. Load Tray 1 or Bypass tray with A4R paper.
 4. Press the Start key to output transmission log.

10.7.8 Detail on settings

A. System Selection

Functions	• To select the system type for remote diagnosis.		
Use	• Use to newly build or change the system.		
Setting/ Procedure	• Select E-Mail, Modem, or Fax. • Fax is available only when the optional Fax kit is being installed.		
	E-Mail (Not Used)	Modem	Fax (Not Used)

B. ID Code

Functions	• To register the Service ID.
Use	• Use when registering and changing Service ID.
Setting/ Procedure	• Enter a 7-digit code from the 10-Key Pad. (0000001 to 9999999) <Registration> <ul style="list-style-type: none">• Touch ID Code and enter the Service ID.• Touch “ID code” key to register the ID.• The “Detail Setting” key will appear when the ID has been registered.

C. Detail Setting

(1) Machine Setting

Functions	<ul style="list-style-type: none"> Execute the primary setting.
Use	<ul style="list-style-type: none"> Use to change the set contents. Use to register the machine to the CS Remote Care Center.
Setting/ Procedure	<ol style="list-style-type: none"> Call the Service Mode to the screen. Touch "CS Remote Care." Touching the "Detail Setting" will display the primary setting. <p>Primary Setting</p> <ul style="list-style-type: none"> Set the Center ID, Device ID, and the phone No. When the system is selected to E-Mail, the phone No. will be the mail address. <p>* When entering the phone No, 10-Keys and keys on the screen have following meanings.</p> <p>[-] Pose : Waits to start transmitting after dialing [W] Wait : Detects the dial tone of the other end [T] Tone dial : Carry out tone dialing [P] Pulse dial : Carry out pulse dialing [*],[#] : To be used as necessary</p> <p>Initial Transmission</p> <ul style="list-style-type: none"> Touching the Initial Transmission key will sent the information to the CS Remote Care Center to register the machine. (Only when the Modem or Fax is selected on the system Input.)

(2) Date/Time Input

Functions	<ul style="list-style-type: none"> To set the data and time-of-day
Use	<ul style="list-style-type: none"> Use to set or change the date and time-of-day.
Setting/ Procedure	<ol style="list-style-type: none"> Call the Service Mode to the screen. Touch "CS Remote Care." Touch "Detail Setting" to access Date/Time Input. Enter the date (month, day and year), time-of-day, and the time zone from the 10-Key Pad. Touch "SET" to start the clock.


(3) RAM Clear

Functions	<ul style="list-style-type: none"> To clear the following data at the Center ID Code, Primary Setting, Date/Time Input, and Common DT.
Use	<ul style="list-style-type: none"> To be used for resetting CS Remote Care. Use to clear various types of data of the Center.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is "Disable." <p style="text-align: center;">Enable"Disable"</p>

(4) Communication Log Print

Functions	<ul style="list-style-type: none">• To print out the Communication Log.
Use	<ul style="list-style-type: none">• Use to output and use the Communication Log.
Setting/ Procedure	<ol style="list-style-type: none">1. Call the Service Mode on the screen.2. Touch "CS Remote Care."3. Touch "Detail Setting" to access Communication Log Print.4. Load Tray 1 or Bypass Tray with A4R paper.5. Press Start key to print out the Communication Log.

(5) Software SW

Functions	<ul style="list-style-type: none">• To change the CS Remote Care settings.
Use	<ul style="list-style-type: none">• To change the settings for CS Remote Care as necessary.
Setting/ Procedure	 For procedures on settings, see 250.

(6) Response Time Out

Functions	<ul style="list-style-type: none">• Not Used.
Use	
Setting/ Procedure	

D. AT Command

Functions	<ul style="list-style-type: none">• To set the command to be issued at the time of Modem Initialization.• This setting is available only when "Modem" is selected for the system setting.
Use	<ul style="list-style-type: none">• To set the command to be issued at the time of Modem Initialization.
Setting/ Procedure	<ul style="list-style-type: none">• Enter the command and touch "SET" to register.

E. Server set

Functions	<ul style="list-style-type: none">• Not Used.
Use	
Setting/ Procedure	

10.7.9 List of the CS Remote Care error code

NOTE

- Error codes in the shaded region may occur when transmitting from the machine to the center.

Error code	Error	Solution
K00_00	Connection NG (Cannot connect from the modem, timed out).	Redial and wait for re-reception.
K00_01	No response (After connection, no start telegram from the center detected).	Redial and wait for re-reception.
K00_02	Copying. Could not be written in non-volatile memory, and line disconnected.	-
K00_03	Center ID mismatch.	Confirm the center ID.
K00_04	Serial number mismatch.	Confirm the serial number.
K00_05	Grammar error (when receiving undefined commands or parameters).	Redial.
K00_06	Received a write order for an unwritable item.	-
K00_07	Unread item error.	-
K00_08	Signal reception time out after a response detection (after the start telegram shuttled).	Redial.
K00_09	Already registered serial number.	-
K00_10	Communication error occurred because of the carrier OFF (NO CARRIER detected in the modem).	Redial.
K00_11	Dialtone (NO DIALTONE) detected in the modem.	Redial.
K00_12	Busy signal (BUSY) detected in the modem.	Redial.
K00_13	NO ANSWER detected in the modem.	Redial.
K00_14	Telegram error (irregular telegram received in response to the telegram you sent).	Retry standard times, and redial.
K00_15	Serial number not registered in the center (4 x 40 telegrams received).	-
K00_16	Errors not defined in the above -00 to 15 (last 2 digits).	Redial.
K00_17	Telephone number you must call was not registered.	-
		-
K01_00	DSR turned OFF or remains turned OFF.	-
K01_01	Error on creating a message queue.	-
K01_02	Error on generating a task.	-
K01_03	Error on sending a message.	-
K01_04	Error on receiving a message.	-
K01_05	Received an error (NG) from the timer task.	-
		-
K02_01	Modem initialization NG.	-
		-

Error code	Error	Solution
K03_00	Center call evacuation buffer is full. Cannot evacuate any more.	-
		-
K05_90	Because of memory shortage, unable to secure enough area for sending a mail.	-
K05_92	Controller in operation: unable to send a mail because the controller is in operation.	In the manual transmission, retry when the controller is idling. In the auto transmission, an automatic retry is performed after 1 minute.
K05_93	Mail sending error: an error was returned on sending a mail.	In the auto transmission, an automatic retry is performed after the specified time. Check if there is no fault in the network environment and the network settings.
K05_94	Machine in operation: unable to send a mail because the machine is in operation.	In the manual transmission, retry when the machine is idling. In the auto transmission, an automatic retry is performed after 1 minute.

10.7.10 Troubleshooting for CS Remote Care

If the transmission is not normal when using the modem, check the following.

- The power for the modem is ON.
- The phone line is properly connected.

10.8 System 1

10.8.1 Marketing Area

Functions	<ul style="list-style-type: none"> To make the various settings (language, paper size, fixed zoom ratios, etc.) according to the applicable marketing area. 						
Use	<ul style="list-style-type: none"> Upon setup. 						
Setting/ Procedure	<p><Marketing Area></p> <ul style="list-style-type: none"> Select the applicable marketing area and touch “END” to set the marketing area. <div style="text-align: center;"> <p>JAPAN US Europe</p> <p>Others1 Others2 Others3 Others4</p> </div> <p>* These are the languages that can be selected on the Utility screen according to different marketing area settings:</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <tr> <td>Japan</td><td>English, Japanese</td></tr> <tr> <td>US</td><td>English, French, Spanish, Japanese</td></tr> <tr> <td>Europe Others1, Others2 Others3</td><td>German, English, French, Dutch, Norwegian, Danish, Swedish, Italian, Portuguese, Spanish, Finnish, Czech, Hungarian, Japanese</td></tr> </table> <p><Fax Target></p> <ol style="list-style-type: none"> 1. Touch the Fax Target key. 2. Select the applicable marketing area using + and - keys, and touch “END.” 	Japan	English, Japanese	US	English, French, Spanish, Japanese	Europe Others1, Others2 Others3	German, English, French, Dutch, Norwegian, Danish, Swedish, Italian, Portuguese, Spanish, Finnish, Czech, Hungarian, Japanese
Japan	English, Japanese						
US	English, French, Spanish, Japanese						
Europe Others1, Others2 Others3	German, English, French, Dutch, Norwegian, Danish, Swedish, Italian, Portuguese, Spanish, Finnish, Czech, Hungarian, Japanese						

10.8.2 Tel/Fax Number

Functions	<ul style="list-style-type: none"> • To enter the TEL/FAX number of the service contact that will appear on the Touch Panel when a malfunction occurs in the machine.
Use	<ul style="list-style-type: none"> • Upon setup.
Setting/ Procedure	<ul style="list-style-type: none"> • Enter the TEL/FAX number (19 digits) from the 10-Key Pad. • Use Interrupt key to enter "-."

10.8.3 Serial Number

Functions	<ul style="list-style-type: none"> • To register the serial numbers of the machine and options. • The numbers will be printed on the list output.
Use	<ul style="list-style-type: none"> • Upon setup.
Setting/ Procedure	<ul style="list-style-type: none"> • Type the serial numbers. 9 digits (0 to 9) Printer, Scanner, ADF, LCT, Sorter/FN, Duplex, Vender, Fax1

10.8.4 No Sleep

Functions	<ul style="list-style-type: none"> To display the option of “OFF” for the Sleep Mode Setting screen available from Administrator Setting.
Use	<ul style="list-style-type: none"> To display the option of “OFF” for the Sleep Mode Setting.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is “Prohibit.” <div style="display: flex; justify-content: space-around; margin-top: 10px;"> Permit “Prohibit” </div>

10.8.5 Original Size Detection


Functions	<ul style="list-style-type: none"> To change the document size detection table.
Use	<ul style="list-style-type: none"> Use to change the setting for the document size detection table. Copy Glass : To change the size detection table for the document glass. ADF : To set whether or not to detect 18k/16k while using ADF (only when marketing area is Europe)
Setting/ Procedure	<p><Copy Glass></p> <ul style="list-style-type: none"> The default setting is "Table1." <div style="text-align: center;"> "Table1" Table2 </div> <p>NOTE</p> <ul style="list-style-type: none"> Table 2 can be set only when Original Size Detection Sensor FD2 is being mounted. <p><ADF></p> <ul style="list-style-type: none"> The default setting is "Disable." <div style="text-align: center;"> Enable "Disable" </div>

10.8.6 Foolscap Size Setting


Functions	• To set the size for Foolscap paper.				
Use	<ul style="list-style-type: none"> • Upon setup. • To change the size for Foolscap paper. 				
Setting/ Procedure	<ul style="list-style-type: none"> • Select the size from among the following five. 				
	220 x 330 mm	8 1/2 x 13	8 1/4 x 13	8 1/8 x 13 1/4	8 x 13

10.8.7 Initialization

A. Data Clear

Functions	<ul style="list-style-type: none"> To initialize the setting data.
Use	<ul style="list-style-type: none"> To clears the setting data. <p> For details on items to be cleared, see page 300 “Contents to be cleared by Reset function.”</p> <p>NOTE</p> <ul style="list-style-type: none"> When removing or installing the hard disk after registering the data below, be sure to clear the data. Referring data: One-Touch Registration, User Authentication/Account Track.
Setting/ Procedure	<ol style="list-style-type: none"> 1. Call the Service Mode on the screen. 2. Select the key as follows. “System 1” → “Initialization” → “Data clear.” 3. Press the Start key. 4. When “OK” is displayed, turn the main power switch OFF, and ON again.

B. System Error Clear

Functions	<ul style="list-style-type: none">To reset the trouble data.
Use	<ul style="list-style-type: none">Use to clear the “Jam”, “Trouble”, “Error” displays, and other improper displays.  For details on items to be cleared, see page 300 “Contents to be cleared by Reset function.”
Setting/Pro- cedure	<ol style="list-style-type: none">Call the Service Mode on the screen.Select the key as follows. “System 1” → “Initialization” → “System Error Clear.”Press the Start key.When “OK” is displayed, turn the main power switch OFF, and ON again.

10.8.8 Install Date


Functions	<ul style="list-style-type: none">To register the date the main unit was installed.
Use	<ul style="list-style-type: none">Upon setup.
Setting/ Procedure	<ol style="list-style-type: none">Call the Service Mode on the screen.Select the key as follows. “System 1” → “Install Date.”Enter the date (Year 4 digit → Month 2 digit → date 2 digit) from the 10-Key Pad.Touch “Entry” key to set the date of installation.

10.9 System 2

10.9.1 HDD

Functions	<ul style="list-style-type: none">Not Used.
Use	
Setting/Pro- cedure	

10.9.2 Image Controller Setting

Functions	<ul style="list-style-type: none"> To set the type of the controller. "Peripheral Mode" appears when "Others" is selected.
Use	<ul style="list-style-type: none"> When setting up the controller.
Setting/ Procedure	<p>Image Controller Setting</p> <ul style="list-style-type: none"> Select the controller to be used. <ul style="list-style-type: none"> "Controller 0" : The standard controller is used. Controller 1 : Fiery Controller 2 : An external controller is used. Controller 3 : An external controller is used. Others : An external controller is used. <p> See the Setup Instructions for the Controller.</p> <p>Peripheral Mode</p> <ul style="list-style-type: none"> Select the operating mode of the Scanner. <ul style="list-style-type: none"> Mode 1: Not use Mode 2: Not use Mode 3: Not use <p>NOTE</p> <ul style="list-style-type: none"> When the setting has been changed, turn OFF and ON the Main Power Switch. <p>Note on returning the setting from "Controller 1" to "Controller 0".</p> <ul style="list-style-type: none"> Selecting "Controller 0" will initialize the following settings made while "Controller 1" was selected. Reset the following items as necessary when using the Internal Standard Controller. <p><Control Panel on the machine></p> <ul style="list-style-type: none"> Setting items included in [Network Setting] available from [Administrator Setting]. (Except [Status Notification Setting] and [Prefix/Suffix Setting] available from the following setting. [Administrator Setting] - [Network Setting] - [Detail Setting].) The following setting [Administrator Setting] - [User Authentication /Account Track] - [General Settings] - [External Server] The following setting [Administrator Setting] - [System Connection] - [IS OpenAPI Setting] <p><Page Scope Web Connection></p> <ul style="list-style-type: none"> SSL/TLS

10.9.3 Option Board Status

Functions	<ul style="list-style-type: none">• To set when the Optional Fax Mount Kit, Local Interface Kit is mounted.												
Use	<ul style="list-style-type: none">• Use when setting up the Optional Fax Mount Kit, Local Interface Kit is mounted.												
Setting/ Procedure	<ul style="list-style-type: none">• Setting modes are Fax (Main) and local I/F.• The default setting is “Unset.” <table><tr><td>Fax (Main)</td><td>:Set</td><td>“Unset”</td></tr><tr><td>Fax (Sub)</td><td>:Not Used</td><td></td></tr><tr><td>local I/F</td><td>:Set</td><td>“Unset”</td></tr><tr><td>JPEG</td><td>:Not Used</td><td></td></tr></table> <p>NOTE</p> <ul style="list-style-type: none">• When the setting has been changed, turn OFF and ON the Main Power Switch.	Fax (Main)	:Set	“Unset”	Fax (Sub)	:Not Used		local I/F	:Set	“Unset”	JPEG	:Not Used	
Fax (Main)	:Set	“Unset”											
Fax (Sub)	:Not Used												
local I/F	:Set	“Unset”											
JPEG	:Not Used												

10.9.4 Consumable Life Reminder

Functions	<ul style="list-style-type: none"> To select whether or not to give the display of PM parts lifetime <p>PM parts lifetime display: An entire screen warning is given when the service life of a specific unit has been reached, prompting the user to replace the part.</p> <ul style="list-style-type: none"> Applicable units: Transfer Belt Unit, Fusing Unit, Paper Dust Remover/Ozone Filter, Transfer Roller Unit, IU (C, M, Y, K)
Use	<ul style="list-style-type: none"> Use to select not to give the display of PM parts lifetime.
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is "Yes." <p style="text-align: center;">"Yes" No</p>

10.9.5 Unit Change

Functions	<ul style="list-style-type: none">• To select who is to replace a unit.• When the unit life arrives, the warning display is intended for the specific person who is going to replace the unit. When "User" is selected : Copying is inhibited. When "Service" is selected : Life warning.															
Use	<ul style="list-style-type: none">• Upon setup															
Setting/ Procedure	<ul style="list-style-type: none">• The following are the default settings:<table><tr><td></td><td>US, Japan, Others 4</td><td>Europe, Others1/2/3</td></tr><tr><td>Toner Cartridge</td><td>: "User" Service</td><td>"User" Service</td></tr><tr><td>Imaging Unit</td><td>: User "Service"</td><td>"User" Service</td></tr><tr><td>Waste Toner Box</td><td>: User "Service"</td><td>"User" Service</td></tr><tr><td>Punch Dust Box</td><td>: User "Service"</td><td>"User" Service</td></tr></table>		US, Japan, Others 4	Europe, Others1/2/3	Toner Cartridge	: "User" Service	"User" Service	Imaging Unit	: User "Service"	"User" Service	Waste Toner Box	: User "Service"	"User" Service	Punch Dust Box	: User "Service"	"User" Service
	US, Japan, Others 4	Europe, Others1/2/3														
Toner Cartridge	: "User" Service	"User" Service														
Imaging Unit	: User "Service"	"User" Service														
Waste Toner Box	: User "Service"	"User" Service														
Punch Dust Box	: User "Service"	"User" Service														

10.9.6 Software Switch Setting

Functions	<ul style="list-style-type: none"> Not Used
Use	
Setting/ Procedure	

10.9.7 Scan Caribration

Functions	<ul style="list-style-type: none"> To set whether to use the calibration adjustment value set prior to the shipping.
Use	<ul style="list-style-type: none"> To be used when CCD unit has bee changed. After replacing the CCD unit, the default value needs to be set since the calibration value set for each unit changes to control the differences in reading performance on each scanner (CCD).
Setting/ Procedure	<ul style="list-style-type: none"> The default setting is ON. <p style="text-align: center;">"ON" OFF</p> <p>NOTE</p> <ul style="list-style-type: none"> When the setting is changed, the function becomes available by turning the auxiliary power button OFF and ON again.

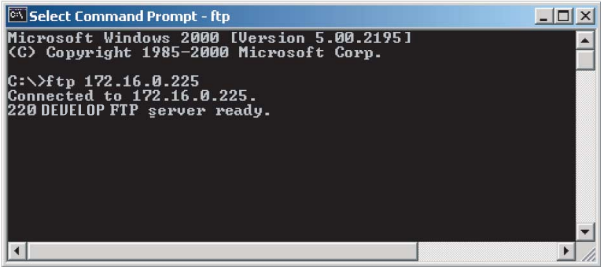
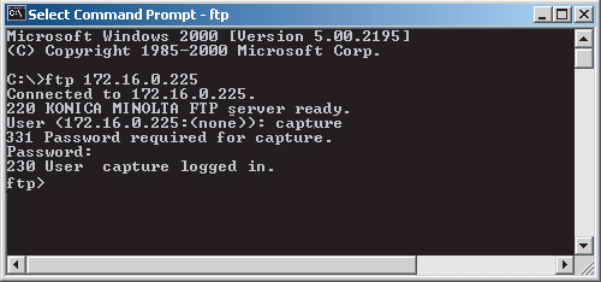
10.9.8 LCT Paper Size Setting

Functions	<ul style="list-style-type: none">To set the paper size for the LCT
Use	<ul style="list-style-type: none">Use to change the paper size for the LCT.
Setting/ Procedure	The default setting depends on the setting made for the applicable marketing area. <div>A481/2 x 11</div>

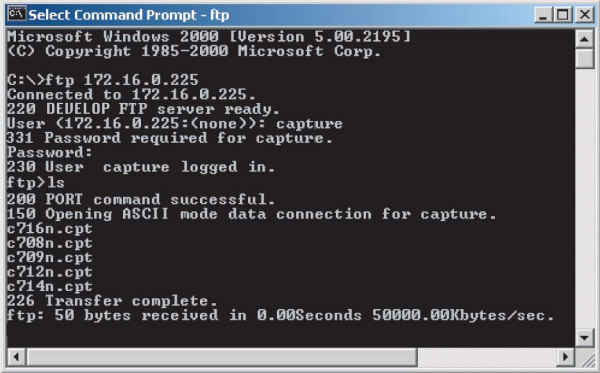
10.9.9 Line Mag Setting

Functions	<ul style="list-style-type: none">To set whether t use the offset value which has been set prior to the shipping.
Use	<ul style="list-style-type: none">To be used after replacing the CCD unit. After replacing the CCD unit, the default value needs to be set since the magnification offset value between the lines set for each unit changes to control the differences in reading performance on each scanner (CCD).
Setting/ Procedure	<ul style="list-style-type: none">The default setting is ON. <div>“ON”OFF</div> <p>NOTE</p> <ul style="list-style-type: none">When the setting is changed, the function becomes valid by turning the auxiliary power button OFF and ON again.

10.9.10 Data Capture

Functions	<ul style="list-style-type: none">When an error occurs, it acquires the print job data in order to analyze the cause of the error.
Use	<ul style="list-style-type: none">When an error occurs, this will be used to analyze the cause of the error according to the print job data.
Setting/ Procedure	<p>NOTE</p> <ul style="list-style-type: none">The following conditions are necessary for this function. When selecting "Security Setting" → "Security Details" → "Print Data Capture" in Administrator Setting, "Allow" must be set.The hard disk must be mounted to the machine.When selecting "Administrator Setting" → "Network Setting" → "FTP Setting", "FTP Server: ON" must be set.This function is not available when using the optional L-controller (IC-402). <ol style="list-style-type: none">Select Service Mode → "System 2", and touch "Data Capture. Select "ON." (While the Data Capture setting is "ON", the print job data from the PC will be stored in the hard disk.)Check the IP address of the machine.Connect the PC (Windows) and the machine with Ethernet cable.Start the DOS command prompt of the PC, and specify the IP address of the machine to start FTP. <div></div> <p>4037F3E538DA</p> <ol style="list-style-type: none">Input the user name and the password. User name: capture Password: sysadm <div></div> <p>4037F3E539DA</p>

6. Using the “ls” command, display the list of the file available for capture.

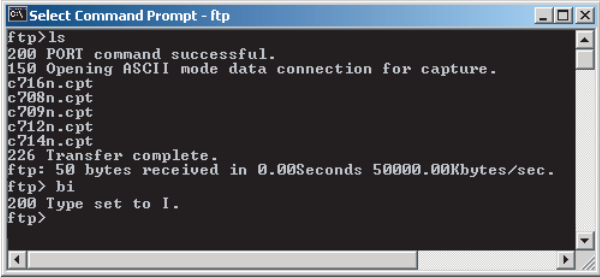


```
Microsoft Windows [Version 5.00.2195]
(C) Copyright 1985-2000 Microsoft Corp.

C:\>ftp 172.16.0.225
Connected to 172.16.0.225.
220 DEUEL0P FTP server ready.
User (172.16.0.225:(none)): capture
331 Password required for capture.
Password:
230 User capture logged in.
ftp>ls
200 PORT command successful.
150 Opening ASCII mode data connection for capture.
c716n.cpt
c708n.cpt
c709n.cpt
c712n.cpt
c714n.cpt
226 Transfer complete.
ftp: 50 bytes received in 0.00Seconds 50000.00Kbytes/sec.
```

4037F3E540DA

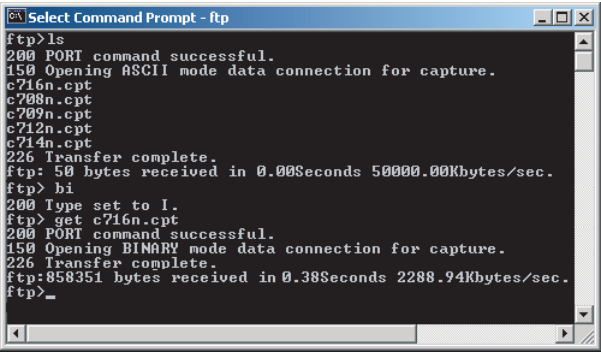
7. Using the “binary” command, set the File transfer mode to the binary transfer.



```
ftp>ls
200 PORT command successful.
150 Opening ASCII mode data connection for capture.
c716n.cpt
c708n.cpt
c709n.cpt
c712n.cpt
c714n.cpt
226 Transfer complete.
ftp: 50 bytes received in 0.00Seconds 50000.00Kbytes/sec.
ftp>bi
200 Type set to I.
ftp>
```

4037F3E541DA

8. Using the “get” command, transfer the data for capture to PC.



```

C:\Select Command Prompt - ftp
ftp>ls
200 PORT command successful.
150 Opening ASCII mode data connection for capture.
c716n.cpt
c708n.cpt
c709n.cpt
c712n.cpt
c714n.cpt
226 Transfer complete.
ftp> 50 bytes received in 0.00Seconds 50000.00Kbytes/sec.
ftp> hi
200 Type set to I.
ftp> get c716n.cpt
200 PORT command successful.
150 Opening BINARY mode data connection for capture.
226 Transfer complete.
ftp>858351 bytes received in 0.38Seconds 2288.94Kbytes/sec.
ftp>_

```

4037F3E542DA

9. Finish the command prompt.

NOTE

- When the data capture is set to “ON”, all print job data will be stored in the hard disk.
- After receiving capture data, select “Administrator Setting” → “Security Setting” → “Security Detail”, and select “Restrict” for Print Data Capture in order to delete the job data stored in the hard disk.

10.10 Counter

- The Counter displays the counts of various counters to allow the Technical Representative to check or set as necessary.

10.10.1 Procedure

1. Touch "Counter" to show the Counter menu.
2. Select the specific counter to be displayed.
3. To clear the counts of two or more counters within a group or across different groups at once, touch "Counter Reset," select the specific counters to be cleared, and touch "END." Two or more counters can be selected.

10.10.2 Life

Functions	<ul style="list-style-type: none"> • To check the number of hours or times each of the different maintenance parts has been used. • To clear the count of each counter.
Use	<ul style="list-style-type: none"> • When each of the maintenance parts is replaced.
Setting/ Procedure	<ul style="list-style-type: none"> • To clear the count of a counter, select the specific part and press the Clear key. • If a counter is cleared mistakenly, press the Interrupt key, which will undo the clearing operation. • It is not possible to clear the count of the counters for the Fusing Unit, Transfer Belt Unit, and IU, which are provided with a new unit detection function. <p><1></p> <ul style="list-style-type: none"> • Fusing Unit : Number of times a sheet of paper is fed through • Transfer Roller Unit : Number of times a sheet of paper is fed through • Transfer Belt Unit : Number of times a sheet of paper is fed through • Paper Dust Remover/ Ozone Filter : Number of times a sheet of paper is fed through • 1st. : Number of sheets of paper fed from Tray 1 • 2nd. : Number of sheets of paper fed from Tray 2 • 3rd. : Number of sheets of paper fed from Tray 3 • 4th. : Number of sheets of paper fed from Tray 4 • Manual Tray : Number of sheets of paper fed from the Bypass <p><2></p> <ul style="list-style-type: none"> • Cyan IU : Period of time over which the Cyan Developing Unit has been used. • Magenta IU : Period of time over which the Magenta Developing Unit has been used. • Yellow IU : Period of time over which the Yellow Developing Unit has been used. • Black IU : Period of time over which the Black Developing Unit has been used. • LCT Parts : Number of sheets of paper fed from the LCT • ADF Feed : Number of sheets of paper fed through the take-up section of the ADF • ADF Reverse : Number of sheets of paper fed through the turnover unit of the ADF • Sorter/Finisher: Number of sheets of paper fed out of the Sorter/Finisher

10.10.3 Jam

Functions	<ul style="list-style-type: none"> To check the number of misfeeds that have occurred at different locations in the machine. To clear the count of each counter.
Use	<ul style="list-style-type: none"> To check the number of paper misfeeds that have occurred
Setting/ Procedure	<ul style="list-style-type: none"> To clear the count of a counter, select the specific part and press the Clear key. If a counter is cleared mistakenly, press the Interrupt key, which will undo the clearing operation.

10.10.4 Service Call Counter

Functions	<ul style="list-style-type: none"> To check the number of malfunctions that have occurred at different locations in the machine To clear the count of each counter.
Use	<ul style="list-style-type: none"> To check the number of malfunctions that have occurred
Setting/ Procedure	<ul style="list-style-type: none"> To clear the count of a counter, select the specific part and press the Clear key. If a counter is cleared mistakenly, press the Interrupt key, which will undo the clearing operation.

10.10.5 Warning

Functions	<ul style="list-style-type: none"> To check the number of warning conditions detected according to the warning type To clear the count of each counter.
Use	<ul style="list-style-type: none"> To check the number of warning conditions that have been detected
Setting/ Procedure	<ul style="list-style-type: none"> To clear the count of a counter, select the specific part and press the Clear key. If a counter is cleared mistakenly, press the Interrupt key, which will undo the clearing operation. When a warning condition occurs, an oil mark appears at the lower left corner of the Basic screen. Touching the oil mark will display the warning code screen.

10.10.6 Maintenance

Functions	<ul style="list-style-type: none"> To set a count value for maintenance of any given part.
Use	<ul style="list-style-type: none"> When any given part is replaced.
Setting/ Procedure	<p>Maint.-Set</p> <ul style="list-style-type: none"> Enter the maintenance counter value from the 10-Key Pad. <p>Maint.-Count</p> <ul style="list-style-type: none"> Counts up when a sheet of paper is fed through the machine. Pressing the Clear key will clear the count. If the count is cleared mistakenly, press the Interrupt key, which will undo the clearing operation.

10.10.7 Service Total

Functions	• To display the count value for the service total counter.
Use	• Use to check the total No. of printed pages including the ones printed by the Service Mode.
Setting/ Procedure	Service Total : No. of pages printed by User mode and Service Mode. Service Total (Duplex) : No. of pages printed by User mode and Service Mode in Duplex.

10.10.8 Counter of Each Mode

Functions	• To display the printed pages in the following specified modes; Copy, Printer, Scanner, and Fax. It also displays the count value of using the specified mode.
Use	• Use to check the printed pages in the following specified modes; Copy, Printer, Scanner, and Fax, as well as No. of times each mode was used, in order to know the using condition.

10.10.9 Service Call History (Data)

Functions	• To display the trouble history in chronological order.
Use	• Use to check the trouble history in chronological order.

10.10.10 ADF Paper Pages

Functions	• To display the No. of pages fed to the Automatic Document Feeder.
Use	• Use to check the No. of pages fed to the Automatic Document Feeder.

10.10.11 Paper Jam History

Functions	• To display the jam history in chronological order.
Use	• Use to check the jam history in chronological order.

10.10.12 Fax Connection failed

Functions	• To display the No. of Fax transmission errors occurred.
Use	• Use to check the No. of Fax transmission errors occurred.

10.11 List Output

10.11.1 Machine Management List

Functions	<ul style="list-style-type: none">• To produce an output of a list of setting values, adjustment values, Total Counter values, and others.
Use	<ul style="list-style-type: none">• At the end of setup or when a malfunction occurs.
Setting/ Procedure	<ul style="list-style-type: none">• Load the A4R plain paper to a paper source.• Press the Start key, which will let the machine produce the list.• Data printed is in English (alphanumeric characters).• The time-of-day and date will also be printed.

10.11.2 Adjustment List

Functions	<ul style="list-style-type: none">• To output the adjustment list for machine adjustment, process adjustment, etc. in Service Mode.
Use	<ul style="list-style-type: none">• At the end of setup or when a malfunction occurs.
Setting/ Procedure	<ul style="list-style-type: none">• Load the A4R plain paper to a paper source.• Press the Start key, which will let the machine produce the list.• Data printed is in English (alphanumeric characters).• The time-of-day and date will also be printed.

10.11.3 Parameter

For details, see FK-502 Service Manual.

10.11.4 Service Parameter

For details, see FK-502 Service Manual.

10.11.5 Protocol Trace

For details, see FK-502 Service Manual.

10.11.6 Fax Setting List

For details, see FK-502 Service Manual.

10.12 State Confirmation

10.12.1 Sensor Check

Functions	<ul style="list-style-type: none"> To display the states of the input ports of sensors and switches when the machine remains stationary.
Use	<ul style="list-style-type: none"> Used for troubleshooting when a malfunction or a misfeed occurs.
Setting/ Procedure	<ul style="list-style-type: none"> The operation of each of the switches and sensors can be checked on a real-time basis. It can be checked as long as the 5-V power line remains intact even when a cover is open.

A. Electrical Components Check Procedure Through Input Data Check

Example

- When a paper misfeed occurs in the paper take-up section of the machine, the Tray 2 Paper Take-Up Sensor is considered to be responsible for it.
1. Remove the sheet of paper misfed.
 2. From the Sensor Check List that follows, check the panel display of the Tray 2 Paper Take-Up Sensor. For the Tray 2 Paper Take-Up Sensor, you check the data of "Take-Up" of "Tray 2."
 3. Call the Service mode to the screen.
 4. Select "State Confirmation" → "Sensor Check" and then select the screen that contains "Take-Up" under "Tray 2." For "Take-Up" under "Tray 2," select "1" on the left-hand side of the screen.
 5. Check that the data for "Take-Up" under "Tray 2" is "0" (sensor blocked).
 6. Move the actuator to unblock the Tray 2 Paper Take-Up Sensor.
 7. Check that the data for "Take-Up" under "Tray 2" changes from "0" to "1" on the screen.
 8. If the input data is "0," change the sensor.

B. Sensor Check Screens

- These are only typical screens which may be different from what are shown on each individual machine.

Sensor Check
END

1	Sensors 1	Tray 1 Device Detection Paper Empty Paper Near Chain Feed Tray 2 Device Detection Paper Empty Paper Near Empty Vertical Transport s Original Take-Up	Upper Limit Sensor Tray 3 Device Detection Paper Empty Paper Near Vertical Transport s Original Take-Up Upper Limit Sensor Tray 4 Device Detection Paper Empty	Paper Near Empty Vertical Transport s Original Take-Up Multi FD Size1 Multi FD Size2 Multi FD Size3 Multi FD Size4 Lift-Up Posit- ion Sensor Paper Empty	Paper Passage Timing Roller Exit OHP Detect Sensor Fusing Loop PC Drive Detect Color PC Drive Main Sensor Sub Sensor Main Sensor Black PC Drive Sub Sensor
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Sensor Check
END

1	Sensors 2	LCT Lift-Up Upper Sensor Lift-Up Lower Shift Tray Home Sensor Shift Tray Empty Original Take-Up Vertical Transport s Paper Empty Empty Shift Tray Empty Lower Over Run	Manual Button Down Division Board Position S Cassette Open Shift Motor Elevator Motor Duplex Set Paperpassage1 Paperpassage2 Horizontal Transport Unit Horizontal Transport	Paper Detect Reverse Sensor Developing Cyan Toner Magenta Toner Empty Yellow Toner Black Toner Empty Cyan Toner Magenta Toner Yellow Toner Black Toner Set	2nd Transfer Transfer Unit Separation Transfer Belt Transfer Unit Separation Waste Toner Waste Toner Full Waste Toner Box Set Fusing Unit Set Fuser Roller Separation
---	-----------	--	---	---	---

Sensor Check
END

1	Sensors 3 / Multi Staple Finisher	Exit(Non-sort1) Exit(Non-sort3) Exit(Finisher) Upper Paper Paper Transport Lower Full(Non-sort1) Full(Non-sort3) Full(Elev. Tray) Empty(Finisher) Surface(Elev.)	Empty(Elev.) Home(CD-Align) Staple Stndby Home Home Home Home PosSW Punch Punch Speed Shift Speed Elevate Tray Raised/Lowered	Home(Shift) Stapler 1 Home Staple Empty Self Priming Stapler 2 Home Staple Empty Self Priming Set Black Toner Set
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Sensor Check
END

1	Sensors 4 / Saddle-stitch Finisher	Entrance Paddle Home Bundle Roller Home Front Align Back Align Alignment Tray Home Home Crease Position Crease Tray Crease Home Crease Roller Home	Crease Clock Paper Paper Surface Raised Position Lowered Clock Middle Slide Home Stapler Home Staple Stapler Connect.	Stapler SW Safety SW Self Prime Front Door Upper Door Front Door SW Rev. Remain Joint SW Punch Depth (Home) S1 Punch Depth (Home) S2 Punch Depth (Home) S3 Punch Depth (Home) S4	Punch Dust Punch Timing Punch Motor Clock Punch Punch (Home) Punch Reg. Ist. Home Horizontal Transport door
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Sensor Check
END

1	Sensors 5	Scanner Home Sensor Original Detecting Sensor Original Cover 15 degree Sensor	Original Size Detection S1 Original Size Detection S2 Original Size Detection S3 Original Size Detection S4 Original Size Detection S5 Original Size Detection S6 Original Size Detection S7 Original Size Detection S8	Original Size Detection S1 Original Size Detection S2 Original Size Detection S3 Original Size Detection S4 Original Size Detection S5 Original Size Detection S6 Original Size Detection S7 Original Size Detection S8
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C. Sensor Check List**(1) Sensors 1 (Main Unit, PC-102, PC-202)**

Symbol	Panel Display		Part/Signal Name	Operation Characteristics/ Panel Display	
				1	0
PC14	Tray 1	Device Detection	Tray 1 Set Sensor	In position	Out of position
PC2		Paper Empty	Tray 1 Paper Empty Sensor	Paper not present	Paper present
PC13		Near Empty	Tray 1 Paper Near-Empty Sensor	Blocked	Unblocked
PC1		Chain Feed	Tray 1 Double Feed Sensor	Paper present	Paper not present
PC103	Tray 2	Device Detection	Tray 2 Set Sensor	In position	Out of position
PC106		Paper Empty	Tray 2 Paper Empty Sensor	Paper not present	Paper present
PC104		Near Empty	Tray 2 Paper Near-Empty Sensor	Blocked	Unblocked
PC108		Vertical Transport	Tray 2 Vertical Transport Sensor	Paper present	Paper not present
PC107		Take-Up	Tray 2 Paper Take-Up Sensor	Paper present	Paper not present
PC105		Upper Limit	Tray 2 Lift-Up Sensor	At raised position	Not at raised position
PC112-PF	Tray 3	Device Detection	Tray 3 Set Sensor	In position	Out of position
PC115-PF		Paper Empty	Tray 3 Paper Empty Sensor	Paper not present	Paper present
PC113-PF		Near Empty	Tray 3 Paper Near-Empty Sensor	Blocked	Unblocked
PC117-PF		Vertical Transport	Tray 3 Vertical Transport Sensor	Paper present	Paper not present
PC116-PF		Take-Up	Tray 3 Paper Take-Up Sensor	Paper present	Paper not present
PC114-PF		Upper Limit	Tray 3 Lift-Up Upper Limit Sensor	At raised position	Not at raised position
PC121-PF	Tray 4	Device Detection	Tray 4 Set Sensor	In position	Out of position
PC124-PF		Paper Empty	Tray 4 Paper Empty Sensor	Paper not present	Paper present
PC122-PF		Near Empty	Tray 4 Paper Near-Empty Sensor	Blocked	Unblocked
PC126-PF		Vertical Transport	Tray 4 Vertical Transport Sensor	Paper present	Paper not present
PC125-PF		Take-Up	Tray 4 Paper Take-Up Sensor	Paper present	Paper not present
PC123-PF		Upper Limit	Tray 4 Lift-Up Sensor	At raised position	Not at raised position

Symbol	Panel Display		Part/Signal Name	Operation Characteristics/ Panel Display	
				1	0
PC111	Manual	Multi FD Size1	Bypass FD Paper Size Sensor/1	ON	OFF
PC112		Multi FD Size2	Bypass FD Paper Size Sensor/2	ON	OFF
PC113		Multi FD Size3	Bypass FD Paper Size Sensor/3	ON	OFF
PC114		Multi FD Size4	Bypass FD Paper Size Sensor/4	ON	OFF
PC115		Lift-Up Position Sensor	Bypass Lift-Up Sensor	At raised position	Not at raised position
PC110		Paper Empty	Bypass Paper Empty Sensor	Paper not present	Paper present
PC28	Paper Pas- sage	Registration Roller	Registration Roller Sensor	Paper present	Paper not present
PC30		Exit	Exit Sensor	Paper present	Paper not present
PC27		OHP Detect	OHP Sensor	OHP	Not OHP
PC4		Fusing Loop Detect	Fusing Paper Loop Sensor	Loop present	Loop not present
PC10	PC Drive Detect	Color PC Drive Main Sensor	Color PC Drum Main Sensor	Blocked	Unblocked
PC35		Color PC Drive Sub Sensor	Color PC Drum Sub Sensor	Blocked	Unblocked
PC11		Black PC Drive Main Sensor	K PC Drum Main Sensor	Blocked	Unblocked
PC36		Black PC Drive Sub Sensor	K PC Drum Sub Sensor	Blocked	Unblocked

D. Sensors 2 (Main Unit, PC-402)

Symbol	Panel Display		Part/Signal Name	Operation Characteristics/ Panel Display	
				1	0
PC4-LCT	LCT	Lift-Up Upper	Tray Upper Limit Sensor	At raised position	Not at raised position
PC13-LCT		Lift-Up Lower	Tray Lower Position Sensor	At lower limit	Not at lower limit
PC12-LCT		Shift Tray Home	Shifter Home Position Sensor	At home	Out of home
PC11-LCT		Shift Tray Stop	Shifter Return Position Sensor	At stop position	Not at stop position
PC1-LCT		Take-Up	Paper Feed Sensor	Paper present	Paper not present
PC2-LCT		Vertical Transport	LCT Vertical Transport Sensor	Paper present	Paper not present
PWB-ELCT		Paper Empty	Paper Empty Board	Paper present	Paper not present
PC3-LCT		Main Tray Empty	Upper Paper Empty Sensor	Paper present	Paper not present
PC9-LCT		Shift Tray Empty	Shift Tray Paper Empty Sensor	Paper present	Paper not present
PC7-LCT		Lower Over Run	Lower Limit Sensor	Malfunction	Operational
UN1-LCT		Manual Button Down	Paper Descent Key	ON	OFF
PC14-LCT		Division Board Position	Shift Gate Home Position Sensor	At home	Out of home
PC6-LCT		Cassette Open	Tray Set Sensor	In position	Out of position
PC8-LCT	Duplex	Shift Motor Pulse	Shift Motor Pulse Sensor	Blocked	Unblocked
PC10-LCT		Elevator Motor Pulse	Elevator Motor Pulse Sensor	Blocked	Unblocked
PI2-DU		Set	Duplex Unit Door Set Sensor	Close	Open
PI1-DU		Paper Passage1	Duplex Unit Transport Sensor 1	Paper present	Paper not present
PC1-DU		Paper Passage2	Duplex Unit Transport Sensor 2	Paper present	Paper not present
PC1-HO	Horizontal Trans. Unit	Horizontal Transport	Paper Sensor	Paper not present	Paper present
PC6-HO		Paper Detect Reverse Sensor	Turnover Empty Sensor	Paper present	Paper not present

Symbol	Panel Display		Part/Signal Name	Operation Characteristics/ Panel Display	
				1	0
PC17	Developing	C Toner Empty	Toner Near-Empty Sensor PQ/C	Toner not present	Toner present
PC16		M Toner Empty	Toner Near-Empty Sensor PQ/M	Toner not present	Toner present
PC15		Y Toner Empty	Toner Near-Empty Sensor PQ/Y	Toner not present	Toner present
PC18		K Toner Empty	Toner Near-Empty Sensor PQ/K	Toner not present	Toner present
PC19		C Toner Set	Toner Set Sensor/C	Out of position	In position
PC26		M Toner Set	Toner Set Sensor/M	Out of position	In position
PC25		Y Toner Set	Toner Set Sensor/Y	Out of position	In position
PC20		K Toner Set	Toner Set Sensor/K	Out of position	In position
PC29	2nd Transfer	Retraction	2nd Image Transfer Pressure/Retraction Sensor	Not Retracted	Retracted
PC12	Transfer Belt	Retraction	1st Image Transfer Retraction Position Sensor	Not Retracted	Retracted
PC31	Waste Toner	Toner Full	Waste Toner Full Sensor	Blocked	Unblocked
PC32		Toner Box Set	Waste Toner Bottle Set Sensor	In position	Out of position
–	Fusing Unit	Set	Fusing Unit In-Position Detection Signal	In position	Out of position
PC33		Fuser Roller Retraction	Fusing Pressure/Retraction Sensor	Not Retracted	Retracted

E. Sensors 3 (FS-507, JS-601)

Symbol	Panel Display		Part/Signal Name	Operation Characteristics/Panel Display	
				1	0
PC1-FN	Multi Staple Finisher	Exit (Non-sort1)	1st Tray Exit Sensor	Paper present	Paper not present
PC19-FN		Exit (Non-sort3)	Job Tray Exit Sensor	Paper present	Paper not present
PC3-FN		Exit (Finisher)	Storage Sensor	Paper present	Paper not present
PC4-FN		Upper Paper Pass	Upper Entrance Sensor	Paper present	Paper not present
PC2-FN		Transport Lower	Lower Entrance Sensor	Paper present	Paper not present
PC6-FN		Full (Non-sort1)	1st Tray Full Sensor	Blocked	Unblocked
PC20-FN		Full (Non-sort3)	Job Tray Full Sensor	Paper present	Paper not present
PC7-FN		Full (Elev. Tray)	Elevator Tray Full Sensor	Blocked	Unblocked
PC5-FN		Empty (Finisher)	Finisher Tray Paper Sensor	Paper present	Paper not present
PWB-D FN		Surface (Elev.)	Elevator Tray Upper Limit Sensor	Paper present	Paper not present
PC8-FN		Empty (Elev.)	Elevator Tray Paper Sensor	Blocked	Unblocked
PC9-FN		Home (CD-Align)	CD Aligning Home Position Sensor	Blocked	Unblocked
PC14-FN		Staple Standby	Staple Home Position Sensor	Blocked	Unblocked
PC12-FN		Home (Store roller)	Storage Roller Home Position Sensor	Blocked	Unblocked
PC13-FN		Home (Exit roller)	Exit Roller Home Position Sensor	Blocked	Unblocked
	Stapler 1	Punch2/3 Position SW			
		Punch Speed			
PC11-FN		Shift Speed	Shift Motor Pulse Sensor	Unblocked	Blocked
S2-FN		Elevate Tray Raised/Lowered	Elevator Tray Upper Limit Switch	ON	OFF
S3-FN			Elevator Tray Lower Limit Switch		
PC10-FN		Home (Shift)	Shift Home Position Sensor	Blocked	Unblocked
-		Home	Staple Home 1	Unblocked	Blocked
-		Staple Empty	Staple Empty 1	Unblocked	Blocked
-		Self Priming	Staple Self Priming 1	Unblocked	Blocked
	Stapler 2				
-		Home	Staple Home 2	Unblocked	Blocked
-		Staple Empty	Staple Empty 2	Unblocked	Blocked
-		Self Priming	Staple Self Priming 2	Unblocked	Blocked

F. Sensors 4 (FS-603, PK-501)

Symbol	Panel Display		Part/Signal Name	Operation Characteristics/Panel Display	
				1	0
PI1-FN	Saddle Stitch Finisher	Entrance	Entrance Sensor	Paper present	Paper not present
PI2-FN		Paddle Home	Paddle Home Position Sensor	HP	
PI3-FN		Bundle Roller Home	Swing Guide Home Position Sensor	HP	
PI4-FN		Front Align	Front Aligning Plate Home Position Sensor	HP	
PI5-FN		Back Align	Rear Aligning Plate Home Position Sensor	HP	
PI6-FN		Alignment Tray	Finisher Tray Sensor	Paper present	Paper not present
PI7-FN		Home (Exit Belt)	Exit Belt Home Position Sensor	HP	
PI10-FN		Crease Position	Folding Position Sensor	Paper present	Paper not present
PI13-FN		Crease Tray	Saddle Tray Sensor	Paper present	Paper not present
PI11-FN		Crease Home	Folding Home Position Sensor	HP	
PI12-FN		Crease Roller Home	Folding Roller Home Position Sensor	HP	
PI14-FN		Crease Clock	Staple/Folding Motor Clock Sensor		
PI8-FN		Paper	Exit Tray Sensor	Paper present	Paper not present
PI9-FN		Paper Surface	Exit Tray Home Position Sensor	Paper surface detected	
PI15-FN		Lift Raised Position	Shift Upper Limit Sensor	Upper limit	
PI16-FN		Lift Lowered Position	Shift Lower Limit Sensor	Lower limit	
PI17-FN		Lift Clock	Shift Motor Clock Sensor		
—		Lift Middle	—	Paper full	
PI18-FN		Slide Home	Slide Home Position Sensor		HP
PI19-FN		Stapler Home	Staple Drive Home Position Sensor	HP	
PI20-FN		Staple	Staple Detecting Sensor	Staples loaded	No staple loaded
—		Stapler Connect.	—		Stapler connection detected
MS3-FN MS4-FN		Stapler Safety SW	Staple Safety Switch (Rear) Staple Safety Switch (Front)	Open	
PI21-FN		Self Prime	Self-Priming Sensor		READY
PI22-FN		Front Door	Front Door Open Sensor		Open
PI23-FN		Upper Cover	Upper Cover Open Sensor		Open

Symbol	Panel Display		Part/Signal Name	Operation Characteristics/Panel Display	
				1	0
MS1-FN	Saddle Stitch Finisher	Front Door SW	Front Door Open Sensor		Open
—		Remain in Reverse Section	—		Paper horiz. side
MS2-FN		Joint SW	Joint Open Sensor		Open
—	Punch Unit	Punch Depth1	—		
—		Punch Depth2	—		
—		Punch Depth3	—		
—		Punch Depth4	—		
—		Punch Dust	—	Punch trash full	
—		Punch Timing	—		
PI3P-PK		Punch Motor Clock	Punch Motor Clock Sensor	Blocked	
PI1P-PK		Punch (Home)	Punch Home Position Sensor	HP	
PI2P-PK		Punch Depth Home	Side Registration Home Sensor	HP	
PC6-HO		Horizontal Transport Door	Horizontal Unit Door Sensor	Blocked	Unblocked

G. Sensors 5 (Main Unit)

Symbol	Panel Display		Part/Signal Name	Operation Characteristics/Panel Display	
				1	0
PC201	Scanner	Home Sensor	Scanner Home Sensor	At home	Out of home
SW201	Org.	Original Cover	Size Reset Switch	Lowered	Raised
PC202	Detecting Sensor	20 Degree	Original Cover Angle Sensor	Less than 20°	20° or more
PC203		Original Size Detection 1	Original Size Detecting Sensor FD1	Original loaded, not mounted	Original not loaded
PC204		Original Size Detection 2	Original Size Detecting Sensor FD2	Original loaded, not mounted	Original not loaded
PC204		Original Size Detection 3	Original Size Detecting Sensor FD2	Original loaded, not mounted	Original not loaded
PC205		Original Size Detection 4	Original Size Detecting Sensor FD3	Original loaded, not mounted	Original not loaded
PC205		Original Size Detection 5	Original Size Detecting Sensor FD3	Original loaded, not mounted	Original not loaded
PC206		Original Size Detection 6	Original Size Detecting Sensor CD1	Original loaded, not mounted	Original not loaded
PC206		Original Size Detection 7	Original Size Detecting Sensor CD1	Original loaded, not mounted	Original not loaded
PC207		Original Size Detection 8	Original Size Detecting Sensor CD2	Original loaded, not mounted	Original not loaded

10.12.2 Table Number

Functions	<ul style="list-style-type: none"> To display the Vg/Vdc output values calculated for the image density of the test pattern (amount of toner sticking) produced on the Transfer Belt during an AIDC detection sequence. Reference values: C, M, Y K Vdc: around 390 V, Vg: around 550 V
Use	<ul style="list-style-type: none"> Used for troubleshooting of image problems.
Setting/Procedure	<ul style="list-style-type: none"> If the value is high, correct so that the image density becomes low. If the value is low, correct so that the image density becomes high.

10.12.3 Level History1

Functions	<ul style="list-style-type: none"> To display TCR (T/C ratio), IDC/Regist Sensor output values, and fusing temperature.
Use	<ul style="list-style-type: none"> Used for troubleshooting of image problems.
Setting/ Procedure	<ul style="list-style-type: none"> TCR-C/-M/-Y/-K: Shows the T/C output reading taken last. IDC1/IDC2 : Shows the latest IDC data. Temp-Belt : Shows the latest Heating Roller temperature data. Temp-Press. : Shows the latest Fusing Pressure Roller temperature data. <p>"Reading taken last" means</p> <ul style="list-style-type: none"> Density of toner of the latest image When a test print is produced by pressing the Start key while Level History 1 is being displayed.

10.12.4 Level History2

Functions	<ul style="list-style-type: none"> IDC Sensor (Transfer Belt bare surface level) as adjusted through the image stabilization sequence and ATVC value.
Use	<ul style="list-style-type: none"> Used for troubleshooting of image problems.
Setting/ Procedure	<ul style="list-style-type: none"> IDC Sensor: Shows the intensity adjustment value (0 to 255) of the IDC Sensor. ATVC (C, M, Y, K): Shows the first image transfer ATVC adjustment value (300 V to 3000 V). ATVC (2nd) : Shows the second image transfer ATVC adjustment value (300 V to 5000 V).

10.12.5 Temp. & Humidity

Functions	<ul style="list-style-type: none"> To display the temperature and humidity of a specific location (AIDC Sensor portion) inside the machine and fusing temperature.
Use	<ul style="list-style-type: none"> Used as reference information when a malfunction occurs.
Setting/ Procedure	<ul style="list-style-type: none"> Machine interior temperature : 0 to 100 °C in 1 °C increments Temperature on Fusing Belt side : 0 to 255 °C in 1 °C increments Temperature on fusing pressure side : 0 to 255 °C in 1 °C increments Machine interior humidity : 0 to 100 % in 1 % increments Absolute humidity : 0 to 100 in 1 increments

10.12.6 CCD Check

Functions	<ul style="list-style-type: none"> To display the D/A value of CCD clamp/gain for R, G, and B.
Use	<ul style="list-style-type: none"> Used for troubleshooting for the CCD Sensor.
Setting/ Procedure	<ul style="list-style-type: none"> Use the following guidelines on the correct range of values. <p>CLAMP: The difference between the max. and min. output values should be within ± 100.</p> <p>GAIN : The difference from the CLAMP values (R, B) should be within 90 for R and B. The difference from the CLAMP value (G) should be within ± 50 for G. The difference between each pair of RO and RE, GO and GE, and BO and BE should be within 30.</p>

10.12.7 Memory / HDD Adj.**A. Memory Check**

Functions	<ul style="list-style-type: none"> To check correspondence of data written to and that read from memory through write/read check. <p>Rough Check</p> <ul style="list-style-type: none"> A check is made to see if the image data reading and writing are correctly made in a very limited area. <p>Detail Check</p> <ul style="list-style-type: none"> A check is made to see if the image data reading and writing are correctly made at the addresses and buses in all areas. The progress of the check sequence is displayed in percentage.
Use	<ul style="list-style-type: none"> If the copy image is faulty.
Adjustment Procedure	<ol style="list-style-type: none"> Call the Service Mode to the screen. Touch these keys in this order: "State Confirmation" → "Memory / HDD Adj." → "Memory Check." Select the desired type of check, either Rough Check or Detail Check. Press the Start key to start the check procedure. When the check procedure is completed, the results are shown on the screen. If the check results are NG, check the memory for connection or replace the memory with a new one. <p>* Press the Stop key to interrupt the check sequence. (Only Rough Check)</p>

B. Compress / Decompression Check

Functions	<ul style="list-style-type: none"> To check whether compression and decompression are carried out properly.
Use	<ul style="list-style-type: none"> If the copy image is faulty.
Adjustment Procedure	<ol style="list-style-type: none"> Call the Service Mode to the screen. Touch these keys in this order: "State Confirmation" → "Memory / HDD Adj." → "Compress / Decompression Check." Pressing the Start key will automatically start to complete a compression/decompression check sequence. The check result will be displayed. <p>* Press the Stop key to interrupt the check sequence.</p>

C. Memory Bus Check

Functions	<ul style="list-style-type: none"> To check to see if image data is correctly transferred from scanner to memory, and from memory to printer.
Use	<ul style="list-style-type: none"> If the copy image is faulty.
Adjustment Procedure	<ol style="list-style-type: none"> Call the Service Mode to the screen. Touch these keys in this order: "State Confirmation" → "Memory / HDD Adj." → "Memory Bus Check." Select either "Scanner → Memory," "Memory → PRT," or both. Pressing the Start key will start the memory bus check and be terminated automatically. The check result will be displayed, "OK" or "NG."

D. Work Memory In/Out Check

Functions	<ul style="list-style-type: none"> To check to see if input and output of image data of work memory are correctly performed.
Use	<ul style="list-style-type: none"> If the print image is faulty.
Adjustment Procedure	<ol style="list-style-type: none"> Call the Service Mode to the screen. Touch these keys in this order: "State Confirmation" → "Memory / HDD Adj." → "Work Memory In/Out Check." Select either "Input Check," "Output Check," or both. Pressing the Start key will start the work memory input/output operation check sequence and be terminated automatically. The check result will be displayed, "OK" or "NG." <p>* Press the Stop key to interrupt the check sequence.</p>

E. HDD R/W Check

Functions	<ul style="list-style-type: none"> To check to see if the hard disk is connected properly, and if read/write operation of the hard disk is correctly performed.
Use	<ul style="list-style-type: none"> When the hard disk is mounted.
Adjustment Procedure	<ol style="list-style-type: none"> Call the Service Mode to the screen. Touch these keys in this order: "State Confirmation" → "Memory / HDD Adj." → "HDD R/W Check." Pressing the Start key will start the hard disk R/W check sequence and be terminated automatically. The check result will be displayed, "OK" or "NG." <p>* Press the Stop key to interrupt the check sequence.</p>

F. HDD Format

Functions	<ul style="list-style-type: none"> To format the hard disk The function proceeds in the order of Physical Format to Logical Format. If the hard disk is yet to be formatted, the malfunction code "C-D010" will appear. Ignore this code and continue with the formatting procedure.
Use	<ul style="list-style-type: none"> When the hard disk is mounted. When the hard disk is to be initialized. (Physical Format to Logical Format)
Adjustment Procedure	<ol style="list-style-type: none"> Call the Service Mode to the screen. Touch these keys in this order: "State Confirmation" → "Memory / HDD Adj." → "HDD Format." <p>(1) Physical Format</p> <ol style="list-style-type: none"> Touch "Physical Format." Press the Start key to start the formatting sequence. The sequence will be automatically terminated as it is completed. Turn OFF and ON the Main Power Switch. <p>(2) Logical Format (Only when initial is set up)</p> <ol style="list-style-type: none"> Touch "Logical Format." Press the Start key to start the formatting sequence. The sequence will be automatically terminated as it is completed. Turn OFF and ON the Main Power Switch. <p>* Formatting the hard disk will erase all data contained in it.</p>

10.12.8 Memory/HDD State

Functions	<ul style="list-style-type: none"> To display the condition and amount of the memory and Hard disk.
Use	<ul style="list-style-type: none"> Use to check the condition and amount of the memory and Hard disk.
Setting/ Procedure	<ul style="list-style-type: none"> When an add-on memory is mounted, the machine automatically recognizes it and displays its capacity.

10.12.9 Color Regist

Functions	<ul style="list-style-type: none"> To check each of C, M, Y, and K for color shift amount. The data is updated after a color shift correction has been made or color shift adjustment has been completed.
Use	<ul style="list-style-type: none"> Use for check when color shift is evident.
Setting/ Procedure	<ul style="list-style-type: none"> For each of C, M, Y, and K, the color shift amount (in X and Y directions) at two locations (one at the front and the other in the rear) and the difference in color shift amount between the front and rear (X and Y directions) are displayed. Display unit: dots The shift amount is displayed with reference to K for C, M, and Y, and that for K is displayed with reference to an ideal position.

10.12.10 IU Lot No.

Functions	<ul style="list-style-type: none"> To display the 10-digit lot number for each of C, M, Y, and K IUs. The lot number data is stored in EEPROM of each IU.
Use	<ul style="list-style-type: none"> Use for checking the IU Lot No.
Setting/ Procedure	<ul style="list-style-type: none"> The IU lot number is displayed even with the Front Door opened; however, the display is blank, since the machine is unable to read the lot number when the Main Power Switch is turned ON with the Front Door open. Nonetheless, the lot number will be displayed when the Front Door is closed. (The engine obtains the IU lot number information when the Front Door is closed.)

10.12.11 LPH Status

Functions	<ul style="list-style-type: none"> To check various information on each of the C, M, Y, and K LPHs
Use	<ul style="list-style-type: none"> Use for checking the LPH Status.
Setting/ Procedure	<ul style="list-style-type: none"> LPH Lot No.: LPH lot number (8 digits) Average Exposure: Average light intensity X: Print width accuracy Y: Linearity accuracy Z: Focus accuracy FFT Rank: Print width rank LPH Rank: 0 to 5 If any one change is made from the default value as a result of LPH chip-to-chip corrections, an asterisk "*" is displayed beside the color identification (C, M, Y, and K) on the screen.

10.12.12 Adjustment Data List

Functions	<ul style="list-style-type: none"> To display the adjustment and setting value set in the main unit.
Use	<ul style="list-style-type: none"> Use to check the adjustment and setting value set in the main unit.

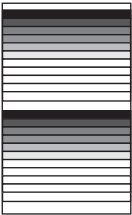
10.13 Test Mode

- To check the image on the printer side by letting the machine produce various types of test pattern. It also tests the printing operation in running mode, as well as the Fax transmission.
- The machine searches through the paper sources in the order of Tray 2, Tray 3, Tray 4, and Tray 1 for paper of the maximum size for printing.


10.13.1 Procedure for Test Pattern Output

1. Touch “Test Mode” to display the Test Mode menu.
2. Touch the desired test pattern key.
3. Set up the desired functions and press the Start key.

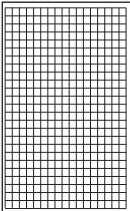
10.13.2 Gradation Pattern

Functions	<ul style="list-style-type: none">• To produce a gradation pattern.
Use	<ul style="list-style-type: none">• Used for checking gradation reproducibility.
Pattern	<div><p>SINGLE HYPER Gradation Cyan</p></div>
Setting/ Procedure	<ul style="list-style-type: none">• # of Print (“1” to 999)• Select “SINGLE” (single copy) or MULTI (multi copy).• Select FEET or “HYPER”.• Select “Gradation” or Resolution if HYPER has been selected.• Select the color mode. “Cyan”, Magenta, Yellow, Black (4PC), CMYK, 8Color, 4Color, Black (1PC)• Black (4PC): Uses four colors.• Black (1PC): Uses one color of black.

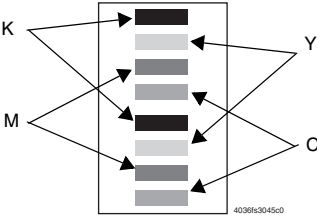
10.13.3 Halftone Pattern

Functions	<ul style="list-style-type: none">To produce a solid halftone pattern.
Use	<ul style="list-style-type: none">Used for checking uneven density and pitch noise.
Pattern	<div><p>SINGLE HYPER Gradation Cyan Density: 255</p><p>4036fs3043c0</p></div>
Setting/ Procedure	<ul style="list-style-type: none"># of Print ("1" to 999)Select "SINGLE" (single copy) or MULTI (multi copy).Select FEET or "HYPER."Select "Gradation" or Resolution if HYPER has been selected.Select the color mode. "Cyan", Magenta, Yellow, Black (4PC), Red, Green, Blue, CMYK, 3 Color, 4 Color, Black (1PC), MIXType the density level (0 to "255").


10.13.4 Lattice Pattern

Functions	<ul style="list-style-type: none">To produce a lattice pattern.
Use	<ul style="list-style-type: none">Used for checking fine line reproducibility and uneven density.A reverse pattern is also used to check for fine line reproducibility of white letters on a solid background.
Pattern	<div><p>SINGLE FEET Cyan CD Width: 5 FD Width: 5 Density: 255 Normal</p><p>4036fs3044c0</p></div>
Setting/ Procedure	<ul style="list-style-type: none"># of Print ("1" to 999)Select "SINGLE" (single copy) or MULTI (multi copy).Select "FEET" or HYPER.Select Gradation or Resolution. (Only select HYPER)Select the color mode. "Cyan", Magenta, Yellow, Black (4PC), Red, Green, Blue, CMYK, 3 Color, 4 Color, Black (1PC)Enter CD width and FD width (0 to 191 dots).Type the density level (0 to "255").Select "Normal" or Reverse.

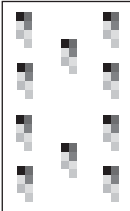
10.13.5 Solid Pattern

Functions	<ul style="list-style-type: none">To produce each of the C, M, Y, and K solid patterns.
Use	<ul style="list-style-type: none">Used for checking reproducibility of image density.
Pattern	<div><div></div><div><p>SINGLE HYPER Gradation Density: 255</p></div></div>
Setting/ Procedure	<ul style="list-style-type: none"># of Print ("1" to 999)Select "SINGLE" (single copy) or MULTI (multi copy).Select FEET or "HYPER."Select "Gradation" or Resolution if HYPER has been selected.Type the density level (0 to "255").


10.13.6 Color Sample

Functions	<ul style="list-style-type: none">To produce a color sample.
Use	<ul style="list-style-type: none">Used for checking reproducibility of each of the different colors.
Pattern	<div><div></div><div><p>SINGLE HYPER Gradation</p></div></div>
Setting/ Procedure	<ul style="list-style-type: none"># of Print ("1" to 999)Select "SINGLE" (single copy) or MULTI (multi copy).Select FEET or "HYPER."Select "Gradation" or Resolution if HYPER has been selected.Produce 12-gradation-level patches of C, M, Y, K, R, G, and B, and a patch of each of the 12 reference colors in the hue circle with lightness and saturation corrected.

10.13.7 8 Color Solid Pattern

Functions	<ul style="list-style-type: none">To produce an 8-color solid pattern.
Use	<ul style="list-style-type: none">Used for checking color reproducibility and uneven density of each color.
Pattern	<div><p>SINGLE HYPER Gradation Density: 255</p><p>4036f6a3047c0</p></div>
Setting/ Procedure	<ul style="list-style-type: none"># of Print ("1" to 999)Select "SINGLE" (single copy) or MULTI (multi copy).Select FEET or "HYPER."Select "Gradation" or Resolution if HYPER has been selected.Type the density level (0 to "255").

10.13.8 LPH Pattern

Functions	<ul style="list-style-type: none">To produce an LPH pattern.
Use	<ul style="list-style-type: none">Used for LPH chip-to-chip correction
Pattern	<div><p>SINGLE HYPER Gradation Border: OFF</p><p>4036f6a3048c0</p></div>
Setting/ Procedure	<ul style="list-style-type: none"># of Print ("1" to 999)Select "SINGLE" (single copy) or MULTI (multi copy).Select FEET or "HYPER."Select "Gradation" or Resolution if HYPER has been selected.Select to turn ON or "OFF" the Border Line.

10.13.9 Running Mode

Functions	<ul style="list-style-type: none">To test the printing operation in Running Mode.
Use	<ul style="list-style-type: none">Use to check the printing operation in Running Mode from each paper source.
Setting/ Procedure	<ol style="list-style-type: none">Call the Service Mode to the screen.Touch these keys in this order: "Test Mode" → "Running Mode."Select the paper size (Tray 1, Bypass only).Select the paper type.Press the Start key to start the Running Mode.Pressing the Stop key will stop operation.

10.13.10 Fax Test

 For details, see FK-502 Service Manual.

10.14 ADF

 For details, see DF-601 Service Manual.

10.15 FAX

 For details, see FK-502 Service Manual.

10.16 Finisher

 For details on adjustment, see the Service Manual for Option FS-603.

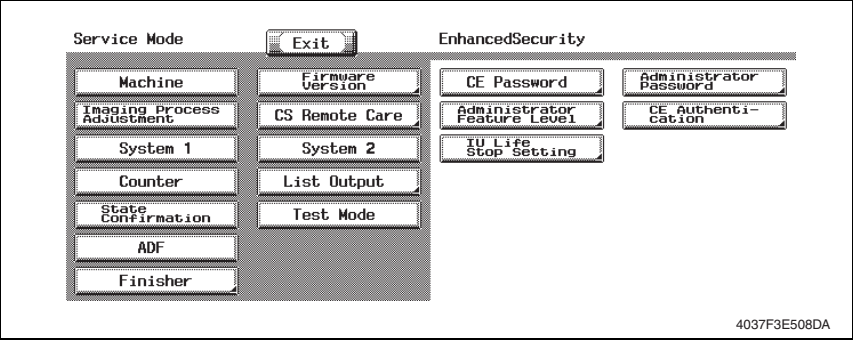
Functions	<ul style="list-style-type: none">• To adjust the positions of center staple and folding for the Finisher.
Use	<ul style="list-style-type: none">• Use when the center staple and folding positions deviate from the correct ones in the copies made using the Fold & Staple function.
Adjustment Specification	<ul style="list-style-type: none">• Center staple position: The adjustment range is -7.0 mm to +7.0 mm (in 1-mm increments).• Fold position: The adjustment range is -7.0 mm to +7.0 mm (in 1-mm increments).

11. Enhanced Security

11.1 Enhanced Security Function Setting Procedure

11.1.1 Procedure

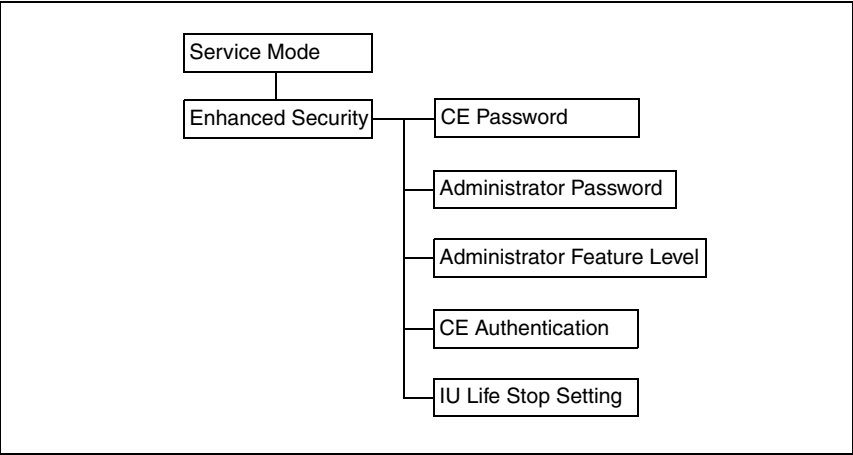
- 1. Call the Service Mode to the screen.
- 2. Press the following keys in this order.
Stop → 0 → Clear
- 3. Enhanced Security menu will appear.



11.1.2 Exiting

- Touch the "Exit" key.

11.2 Enhanced Security Function Tree



11.3 Settings in the Enhanced Security

11.3.1 CE Password

Functions	<ul style="list-style-type: none">To set and change the CE Password.
Use	<ul style="list-style-type: none">Use to change the CE Password.
Setting/ Procedure	<ul style="list-style-type: none">Enter the CE Password (8 digits) on the on-screen keyboard.The initial setting is "92729272." <p>Current Password : Enter the currently using CE Password. New Password : Enter the new CE Password. Re-Input Password: Enter the new CE Password again.</p> <p>NOTE</p> <ul style="list-style-type: none">When the following setting leads to the Password Rules "ON", the password with the same letters as well as the password which is same as the previous one cannot be changed. "Administrator Setting" → "Security Setting"NEVER forget the CE password. When forgetting the CE password, call responsible person of Develop.

11.3.2 Administrator Password

Functions	<ul style="list-style-type: none">To set and change the Administrator Password.
Use	<ul style="list-style-type: none">Use to change the Administrator Password.
Setting/ Procedure	<ul style="list-style-type: none">Enter the Administrator Password (8 digits) on the on-screen keyboard.The initial setting is "12345678." <p>New Password : Enter the new Administrator Password. Re-Input Password: Enter the new Administrator Password again.</p> <p>NOTE</p> <ul style="list-style-type: none">When the following setting leads to the Password Rules "ON", the password with the same letters as well as the password which is same as the previous one cannot be changed. "Administrator Setting" → "Security Setting"

11.3.3 Administrator Feature Level

Functions	<ul style="list-style-type: none">To set which Modes to be allowed for the Administrator to use in Service Mode.																																														
Use	<div><ul style="list-style-type: none">Use when allowing the Administrator to use some Modes in Service Mode.The Modes allowed for the Administrator to use in each setting are as follows.</div> <table><tr><th colspan="3">Administrator Setting Function</th><th>Level 1</th><th>Level 2</th></tr><tr><td rowspan="10">System Setting → Expert Setting</td><td rowspan="2">Printer Adjustment</td><td>Vertical Adjustment</td><td>-</td><td>○</td></tr><tr><td>Erase Leading Edge</td><td>-</td><td>○</td></tr><tr><td rowspan="4">Scanner Adjustment</td><td>Leading Edge Adjustment</td><td>-</td><td>○</td></tr><tr><td>Centering</td><td>-</td><td>○</td></tr><tr><td>Horizontal Adjustment</td><td>-</td><td>○</td></tr><tr><td>Vertical Adjustment</td><td>-</td><td>○</td></tr><tr><td rowspan="4">ADF Adjust- ment</td><td>Centering</td><td>-</td><td>○</td></tr><tr><td>Original Stop Position</td><td>-</td><td>○</td></tr><tr><td>Centering Auto Adjustment</td><td>-</td><td>○</td></tr><tr><td>Auto Adj. of Stop Position</td><td>-</td><td>○</td></tr><tr><td rowspan="2">Standard Size Set- ting</td><td>Original Glass Original Size Detect</td><td>-</td><td>○</td></tr><tr><td>Foolscap Size Setting</td><td>-</td><td>○</td></tr></table>	Administrator Setting Function			Level 1	Level 2	System Setting → Expert Setting	Printer Adjustment	Vertical Adjustment	-	○	Erase Leading Edge	-	○	Scanner Adjustment	Leading Edge Adjustment	-	○	Centering	-	○	Horizontal Adjustment	-	○	Vertical Adjustment	-	○	ADF Adjust- ment	Centering	-	○	Original Stop Position	-	○	Centering Auto Adjustment	-	○	Auto Adj. of Stop Position	-	○	Standard Size Set- ting	Original Glass Original Size Detect	-	○	Foolscap Size Setting	-	○
Administrator Setting Function			Level 1	Level 2																																											
System Setting → Expert Setting	Printer Adjustment	Vertical Adjustment	-	○																																											
		Erase Leading Edge	-	○																																											
	Scanner Adjustment	Leading Edge Adjustment	-	○																																											
		Centering	-	○																																											
		Horizontal Adjustment	-	○																																											
		Vertical Adjustment	-	○																																											
	ADF Adjust- ment	Centering	-	○																																											
		Original Stop Position	-	○																																											
		Centering Auto Adjustment	-	○																																											
		Auto Adj. of Stop Position	-	○																																											
Standard Size Set- ting	Original Glass Original Size Detect	-	○																																												
	Foolscap Size Setting	-	○																																												
Setting/ Procedure	<div><ul style="list-style-type: none">The default setting is Level1.</div> <table><tr><td>“Level1”</td><td>Level2</td><td>Prohibit</td></tr></table>	“Level1”	Level2	Prohibit																																											
“Level1”	Level2	Prohibit																																													

11.3.4 CE Authentication

Functions	• To determine whether or not to authenticate CE Password as entering Service Mode.
Use	• Use when authenticating CE Password as entering Service Mode.
Setting/ Procedure	<ul style="list-style-type: none"> • The default setting is OFF. <div style="display: flex; justify-content: space-around; margin-top: 10px;"> ON “OFF” </div>

11.3.5 IU Life Stop Setting

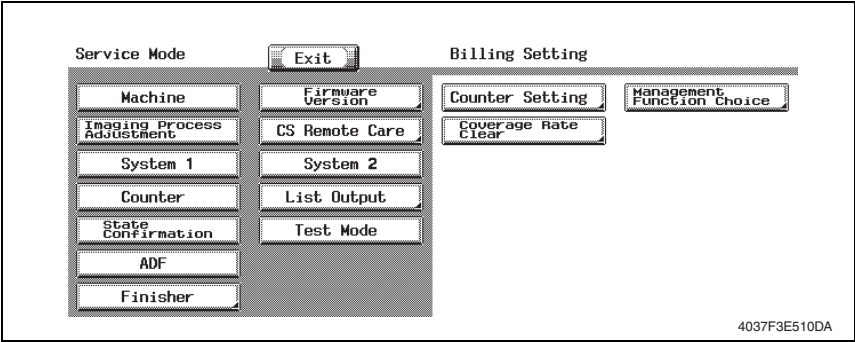
Functions	• To select whether or not to stop a print cycle when the IU reaches its service life
Use	• Use to select not to stop the print cycle when the IU reaches its service life.
Setting/ Procedure	<p>The default setting is Stop.</p> <div style="display: flex; justify-content: space-around;"> “Stop” Not Stop </div>

12. Billing Setting

12.1 Billing Setting Function Setting Procedure

12.1.1 Procedure

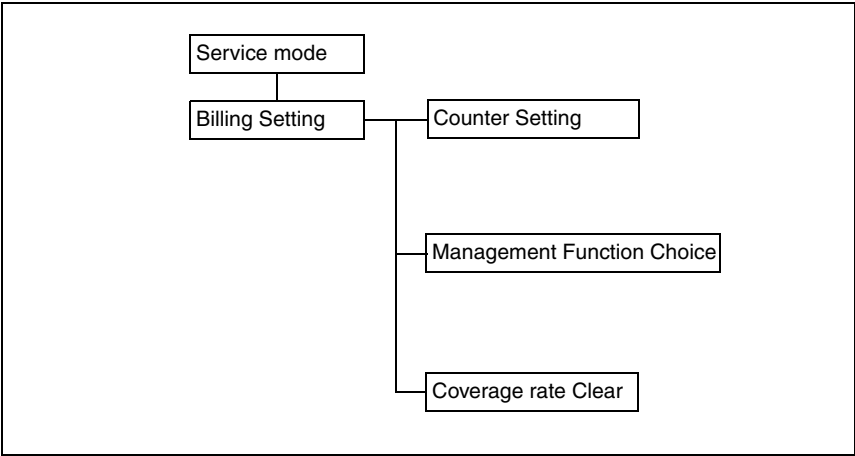
- 1. Call the Service Mode to the screen.
- 2. Press the following keys in this order.
Stop → 9
- 3. Billing Setting menu will appear.



12.1.2 Exiting

- Touch the "Exit" key.

12.2 Billing Setting Function Tree



12.3 Settings in the Billing Setting

12.3.1 Counter Setting

Functions	<ul style="list-style-type: none">• To set the counting method for the Total Counter and Size Counter.																																																														
Use	<ul style="list-style-type: none">• Use to change the counting method for the counters.																																																														
Setting/ Procedure	<div>Total Counter Mode 1: 1 Count per 1 copy cycle (Default: US, Others 4, Japan) Mode 2: Double count-up according to paper size and copying mode (Default: Europe, Others 1, Others 2, Others 3)</div> <div>Size Counter<ul style="list-style-type: none">• Not counted (Default: US, Others 4, Japan)• A3 and 11 × 17• A3, B4, 11 × 17, and 81/2 × 14 (Default: Europe, Others 1, Others 2, Others 3)• A3, B4, Foolscap, 11 × 17, 11 × 14, and 81/2 × 14</div> <div>* Count-up Table<table><tr><th>Copying</th><th colspan="4">1-Sided</th><th colspan="4">2-Sided</th></tr><tr><th>Size</th><th colspan="2">Sizes other than those specified</th><th colspan="2">Specified sizes</th><th colspan="2">Sizes other than those specified</th><th colspan="2">Specified sizes</th></tr><tr><th rowspan="2"><div>Mode</div></th><th colspan="2">Mode</th><th colspan="2">Mode</th><th colspan="2">Mode</th><th colspan="2">Mode</th></tr><tr><th>1</th><th>2</th><th>1</th><th>2</th><th>1</th><th>2</th><th>1</th><th>2</th></tr><tr><td>Total</td><td>1</td><td>1</td><td>1</td><td>2</td><td>2</td><td>2</td><td>2</td><td>4</td></tr><tr><td>Size</td><td>0</td><td>0</td><td>1</td><td>1</td><td>0</td><td>0</td><td>2</td><td>2</td></tr><tr><td>2-sided Total</td><td>0</td><td>0</td><td>0</td><td>0</td><td>1</td><td>1</td><td>1</td><td>1</td></tr></table></div> <div>0: No count; 1: 1 count; 2: 2 counts; 3: 3 counts; 4: 4 counts</div>	Copying	1-Sided				2-Sided				Size	Sizes other than those specified		Specified sizes		Sizes other than those specified		Specified sizes		<div>Mode</div>	Mode		Mode		Mode		Mode		1	2	1	2	1	2	1	2	Total	1	1	1	2	2	2	2	4	Size	0	0	1	1	0	0	2	2	2-sided Total	0	0	0	0	1	1	1	1
Copying	1-Sided				2-Sided																																																										
Size	Sizes other than those specified		Specified sizes		Sizes other than those specified		Specified sizes																																																								
<div>Mode</div>	Mode		Mode		Mode		Mode																																																								
	1	2	1	2	1	2	1	2																																																							
Total	1	1	1	2	2	2	2	4																																																							
Size	0	0	1	1	0	0	2	2																																																							
2-sided Total	0	0	0	0	1	1	1	1																																																							

12.3.2 Management Function Choice

Functions	<ul style="list-style-type: none">To set whether or not the Key Counter, Data Controller, and Vendor are installed.
Use	<ul style="list-style-type: none">Use to change the counting method for the administrative units.
Setting/ Procedure	<p>Key Counter</p> <ul style="list-style-type: none">Default setting: UnsetSelect “Color Mode” and “Message” when the Key Counter is mounted. <p>* Color Mode</p> <ul style="list-style-type: none">If “Mode 1” is selected for “Total Counter” Mode 1: 1 count per 1 copy cycle Mode 2: 2 counts per 1 copy cycle Mode 3: 3 counts per 1 copy cycle Mode 4: 4 counts per 1 copy cycle Mode 5: 5 counts per 1 copy cycleIf “Mode 2” is selected for “Total Counter,” “Sizes other than those specified” is selected for “Size Counter,” and the paper used is the specified size or one other than those specified Mode 1: 2 counts per 1 copy cycle Mode 2: 4 counts per 1 copy cycle Mode 3: 6 counts per 1 copy cycle Mode 4: 8 counts per 1 copy cycle Mode 5: 10 counts per 1 copy cycleIf “Mode 2” is selected for “Total Counter,” “Sizes other than those specified” is selected for “Size Counter,” and the paper used is the specified size or one other than those specified Mode 1: 1 count per 1 copy cycle Mode 2: 2 counts per 1 copy cycle Mode 3: 3 counts per 1 copy cycle Mode 4: 4 counts per 1 copy cycle Mode 5: 5 counts per 1 copy cycle <p>* Message</p> <p>Select the message type when the administrative unit is mounted.</p> <p>Type 1: Message for Key Counter Type 2: Message for Card scanning Type 3: Message for ID management Type 4: Message for Remote SW</p> <p>Admin. Unit (Data Controller)</p> <ul style="list-style-type: none">Default setting: Unset <p>Vendor</p> <ul style="list-style-type: none">Default setting: UnsetSelect “Interface” and “Message” when the vendor is mounted. <p>* Interface</p> <p>Select the interface type when the vendor is mounted.</p> <p>Type 1: Coin Vendor is set Type 2: Not used</p> <p>* Message</p> <p>Select the message type when the vendor is mounted.</p> <p>Type 1: Message for Coin Vendor Type 2: Message for Card Keeper Type 3: Message common to Coin Vendor and Card Keeper</p>

12.3.3 Coverage Rate Clear

Functions	<ul style="list-style-type: none">To clear the coverage rate
Use	<ul style="list-style-type: none">Use to clear the coverage rate
Setting/ Procedure	<ul style="list-style-type: none">The default setting is Unset.<div>Set"Unset"</div>Touching "END" key will clear the coverage rate.

13. Procedure for Resetting

13.1 Trouble resetting

Functions	<ul style="list-style-type: none"> If the trouble occurs and the status would not be cleared by turning main power switch OFF and ON again, or opening and closing the front door, clear the status of the machine.
Use	<ul style="list-style-type: none"> To be used when the status would not be cleared by turning power OFF and ON again, or opening and closing the front door in case of a trouble.
Setting/ Procedure	<ol style="list-style-type: none"> Turn main power switch OFF. Turn main power switch ON while pressing the Utility/Counter key. Touch "Trouble Reset" key. Check to make sure that "OK" is displayed and the it has been reset. Turn main power switch OFF and ON again, and make sure that the machine properly starts.

13.2 Contents to be cleared by Reset function

Items for clearing		Front Door Open/Close	Trouble resetting	Initialization		Main power switch Off/On
				System Error Clear	Data Clear	
Contents to be cleared						
Jam display		○	-	○	○	-
Malfunction display	Fusing	-	○	○	-	-
	Optical Scanner	○	○	○	○	○
	CC151	-	-	-	-	○
	Others	-	-	-	-	○
Erratic operation / display		-	-	-	-	○
Utility Mode (Except items on Expert adjustment.)		-	-	-	○	-
Service Mode (System 1/2)		-	-	-	□ *1	-
Billing Setting Counter Setting		-	-	-	○	-
Adjustment of the touch panel position		-	-	-	○	-

○: Will be cleared (initialized)

-: Will not be cleared

□ *1: Items to be cleared	
System 1	Marketing Area (Fax Target Only)
	Foolscap Size Setting
	Install Date
	Tel/Fax Number
	No Sleep
	Original Size Detection
System 2	HDD

14. Mechanical adjustment

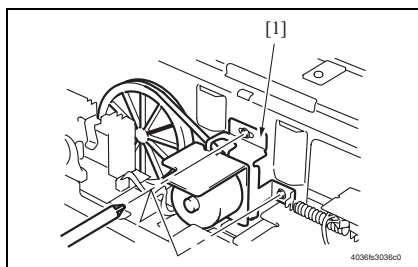
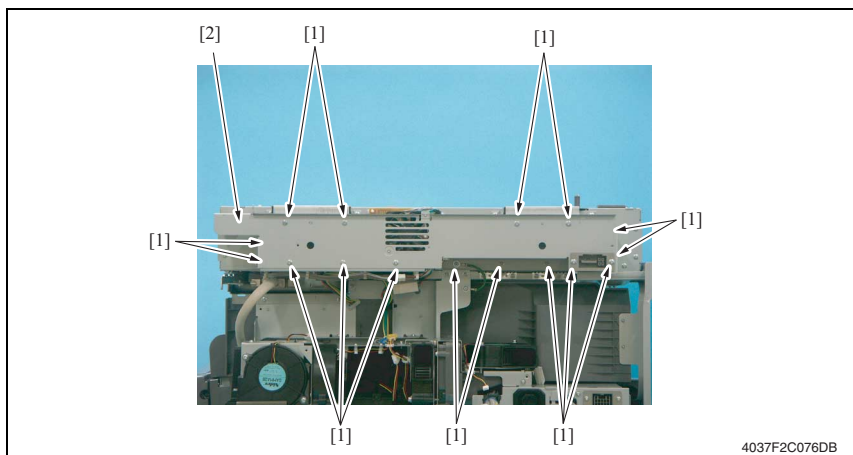
14.1 Mechanical adjustment of the scanner section

14.1.1 Adjustment of the Scanner Motor Belt

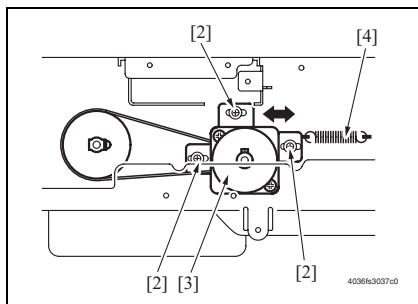
This adjustment must be made in the following case:

- The Scanner Motor Assy has been removed.
- The Scanner Drive Cables have been rewound.

1. Remove the IR Rear Cover.
2. Remove 16 screws and the reinforcement frame.



3. Loosen the three screws that secure the Scanner Motor mounting bracket [1].

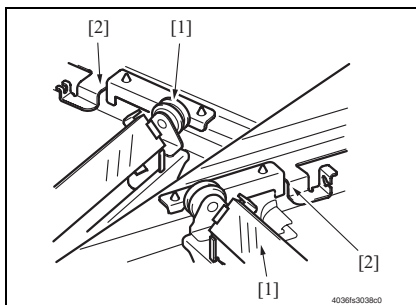


4. With the Scanner drive gear set screw [2] located on the right-hand side as shown on the left, slide the Scanner Motor Assy [3] to the left and check that it is returned to the original position by the tension of the spring [4]. Perform this step three times.
5. Tighten the three screws [2] to fix the Scanner Motor Assy into position.

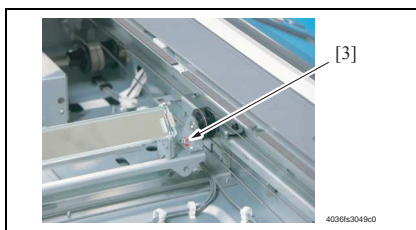
14.1.2 Focus Positioning of the Scanner and Mirrors Unit

This adjustment must be made in the following case:

- The Scanner Drive Cables have been rewound



1. Slide the Mirrors Unit [1] to the center until it is pressed up against the cutouts in the rails [2].

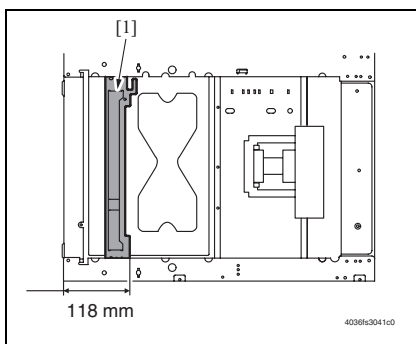


2. If the Mirrors Unit is not pressed up against the cutouts, loosen the adjusting screw (to which red paint is applied) [3] of the Mirrors Unit and press the carriage up against the cutouts. Then, tighten the adjusting screw.

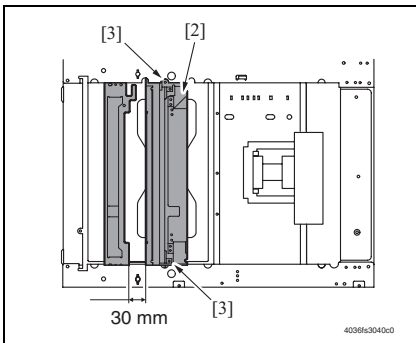
14.2 Scanner Position Adjustment

This adjustment must be made in the following case:

- The Scanner Drive Cables have been rewound.
- Focus Positioning of the Scanner and Mirrors Unit must be completed.



1. Slide the Mirrors Unit [1] to the position shown on the left.



2. Secure the Scanner [2] in the position shown on the left using the two Scanner positioning screws [3].
3. Make the Feed Direction Adjustment.

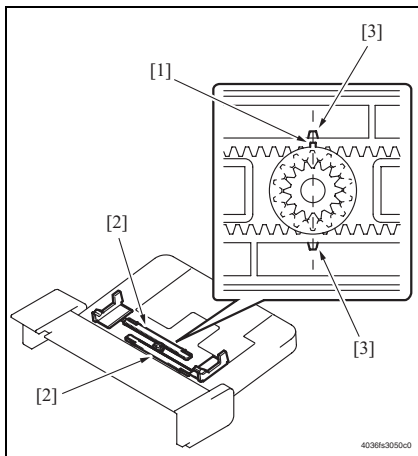
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14.3 Mechanical adjustment of the bypass tray section

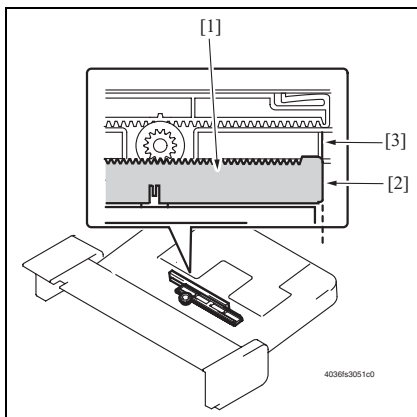
14.3.1 Adjustment of the Bypass Paper Size Unit

This adjustment must be made in the following case:

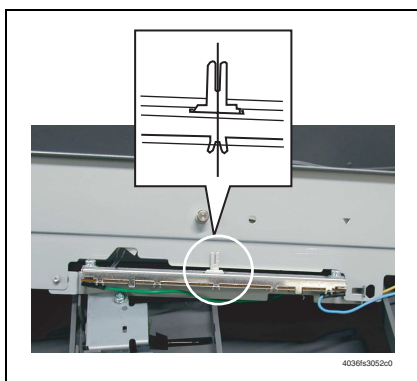
- The Bypass Paper Size Unit has been removed.



1. Install the gear so that the protrusion of the gear [1] and the mark [3] on the Bypass Guide Rack Gear [2] are aligned in a straight line.



2. Install the Bypass Unit Cover so that part A (edge) [2] of the Rack Gear [1] for the Bypass Paper Size Unit and part B [3] of the Bypass Unit Cover are aligned in a straight line.



3. When the Bypass Paper Size Unit base is mounted, align the lever position of the Bypass Paper Size Unit with the tab at the center in a straight line.

4. After the Bypass Paper Size Unit base has been mounted, check that the lever of the Bypass Paper Size Unit moves smoothly in a manner operatively connected to the Bypass Guide.
5. Call the Service Mode to the screen and select "Machine" → "Manual Bypass Tray Adjustment." Then, carry out "Manual Bypass Tray Adjustment."

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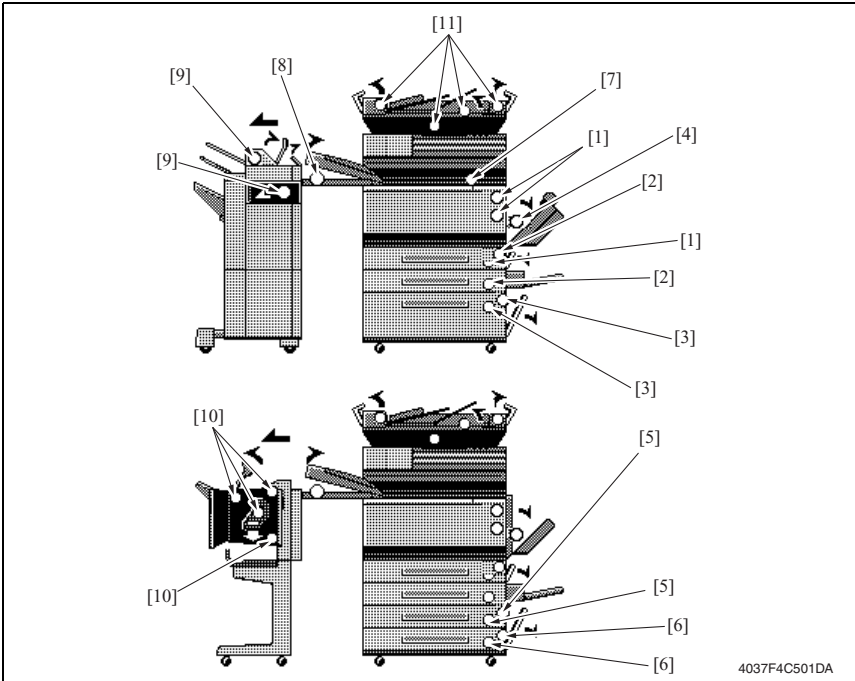
Blank Page

Troubleshooting

15. Jam Display

15.1 Misfeed Display

- When a paper misfeed occurs, the misfeed message, misfeed location, and paper location are displayed on the Touch Panel of the machine.



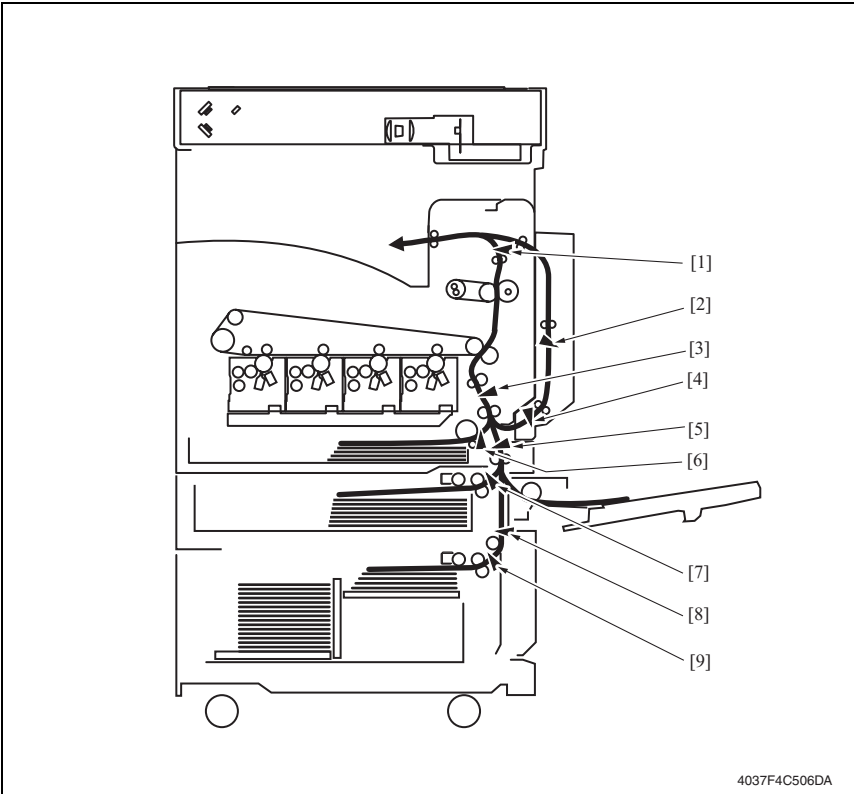
Display	Code	Misfeed Location	misfeed processing location	Action
[1]	1101	Tray 1 take-up	Right Door	E3 310
	3001	2nd Image Transfer		
[2]	1201	Tray 2 take-up	Tray 2 Right Door	E3 311
	2001	Vertical Transport		
	1001	Manual Bypass take-up	Manual Bypass Slide Board	
[3]	1501	LCT take-up	LCT Right Door	E3 313
	2001	Vertical Transport		
[4]	9301	Duplex Unit transport	Duplex Unit Right Door	E3 316
	9201	Duplex Unit pre-registration		
[5]	1301	Tray 3 take-up	Paper Feed Unit Right Door	E3 314
	2001	Vertical Transport		E3 315
[6]	1401	Tray 4 take-up		
	2001	Vertical Transport		
[7]	3201	Exit	Right Door	E3 317
[8]	7403	Horizontal transport	Horizontal transport cover	E3 FS-507 E3 FS-603
[9]	7401	Finisher FS-507 / Job Separator JS-601	Finisher Door	E3 FS-507
	7402			
	7404			
	7405			
	7406			
[10]	7401	Finisher FS-603	Finisher Door	E3 FS-603
	7403			
	7404			
	7405			
	7407			
[11]	6401	ADF	Document Feeder Door	E3 Duplex
	6402			
	6403			
	6404			
—	9901	System Control Jam	—	—

15.1.1 Misfeed Display Resetting Procedure

- Open the corresponding door, clear the sheet of paper misfeed, and close the door.

15.2 Sensor layout

15.2.1 System Mounted with PC-402.

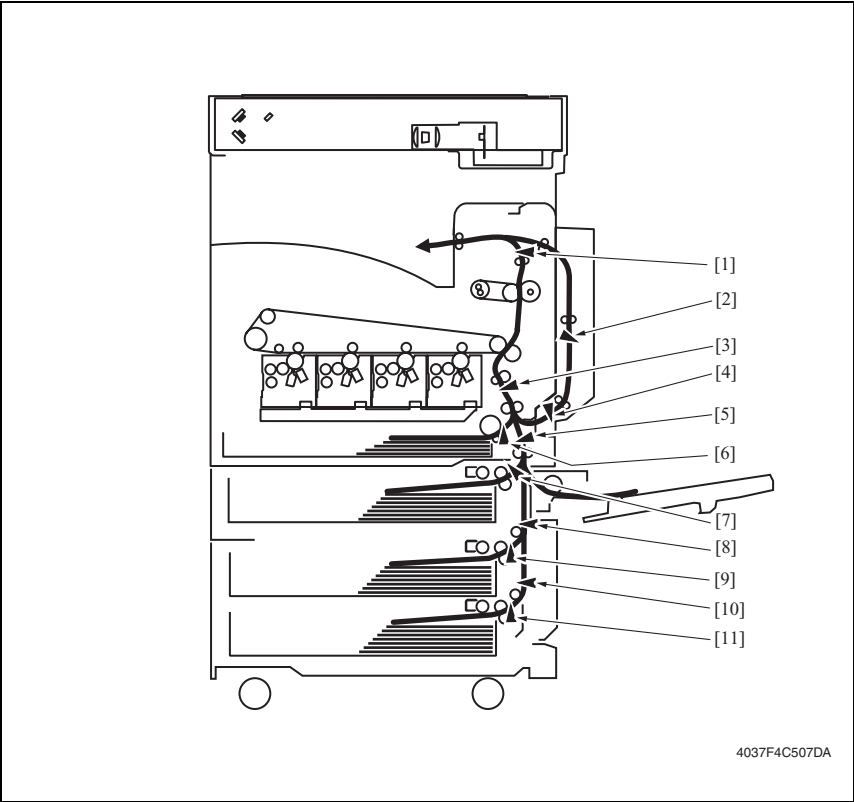


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[1]	Exit Sensor	PC30	[5]	Tray 2 Vertical Transport Sensor	PC108
[2]	Duplex Unit Transport Sensor 1	PI1-DU	[6]	Tray 1 Double Feed Sensor	PC1
[3]*1	Registration Roller Sensor	PC28	[7]	Tray 2 Paper Take-Up Sensor	PC107
[3]*1	OHP Sensor	PC27	[8]	LCT Vertical Transport Sensor	PC2-LCT
[4]	Duplex Unit Transport Sensor 2	PC1-DU	[9]	LCT Paper Feed Sensor	PC1-LCT

*1: Two different types of sensors are located in the area near [3].

15.2.2 System Mounted with PC-202.



[1]	Exit Sensor	PC30	[6]	Tray 1 Double Feed Sensor	PC1
[2]	Duplex Unit Transport Sensor 1	PI1-DU	[7]	Tray 2 Paper Take-Up Sensor	PC107
[3]*1	Registration Roller Sensor	PC28	[8]	Tray 3 Vertical Transport Sensor	PC117-PF
[3]*1	OHP Sensor	PC27	[9]	Tray 3 Paper Take-Up Sensor	PC116-PF
[4]	Duplex Unit Transport Sensor 2	PC1-DU	[10]	Tray 4 Vertical Transport Sensor	PC126-PF
[5]	Tray 2 Vertical Transport Sensor	PC108	[11]	Tray 4 Paper Take-Up Sensor	PC125-PF

*1: Two different types of sensors are located in the area near [3].

15.3 Solution

15.3.1 Initial Check Items

- When a paper misfeed occurs, first make checks of the following initial check items

Check Item	Action
Does paper meet product specifications?	Change paper.
Is paper curled, wavy, or damp.	Change paper. Instruct user in correct paper storage.
Is a foreign object present along the paper path, or is the paper path deformed or worn?	Clean or change the paper path.
Are the Paper Separator Fingers dirty, deformed, or worn?	Clean or change the defective Paper Separator Finger.
Are rolls/rollers dirty, deformed, or worn?	Clean or change the defective roll/roller.
Are the Edge Guide and Trailing Edge Stop at correct position to accommodate paper?	Set as necessary.
Are actuators found operational as checked for correct operation?	Correct or change the defective actuator.

15.3.2 Tray 1 take-up, 2nd Image Transfer, Fusing Misfeed

A. Detection Timing

Type	Description
2nd Image Transfer, Fusing misfeed detection	The leading edge of the paper does not block the Exit Sensor (PC30) even after the lapse of a given period of time after the Registration Roller Clutch has been energized.
	The Registration Roller Sensor (PC28) is not unblocked even after the lapse of a given period of time after it has been blocked by the paper. (Except when feeding the paper from Tray 1)
Tray 1 take-up misfeed detection	The leading edge of the paper does not block the Registration Roller Sensor (PC28) even after the lapse of a given period of time after the Tray 1 Paper Feed Clutch (CL1) has been energized. (When the system speed is 60 mm/s or 165 mm/s)
	The leading edge of the paper does not block the OHP Sensor (PC27) after the lapse of a given period of time after the Tray 1 Paper Feed Clutch (CL1) has been energized. (When the system speed is 215 mm/s)
Misfeed detected as a result of delayed deactivation of sensor	The Registration Roller Sensor (PC28) is not unblocked even after the lapse of a given period of time after it has been blocked by the paper. (When the system speed is 60/mms or 165 mm/s)
	The OHP sensor (PC27) is not unblocked even after the lapse of a given period of time after PC27 has been blocked by the paper. (When the system speed is 215 mm/s)
Detection of paper left in 2nd Image Transfer	The Registration Roller Sensor (PC28) is blocked when the Main Power Switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.
	The OHP Sensor (PC27) is blocked when the Main Power Switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.
Detection of paper left in Tray 1	Tray 1 Double Feed Sensor (PC1) is blocked when the Main Power Switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

B. Action

Relevant Electrical Parts	
Tray 1 Double Feed Sensor (PC1) Registration Roller Sensor (PC28) Exit Sensor (PC30) OHP Sensor (PC27)	Control Board (PWB-MC) Registration Roller Clutch (CL3) Tray 1 Paper Feed Clutch (CL1)

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Initial check items	—	—
2	PC1 I/O check, Sensor check	PWB-MC PJ22MC-8 (ON)	C to D-5
3	PC28 I/O check, Sensor check	PWB-MC PJ24MC-6 (ON)	C to D-3
4	PC30 I/O check, Sensor check	PWB-MC PJ24MC-12 (ON)	C to D-4
5	PC27 I/O check, Sensor check	PWB-MC PJ24MC-2 (ON)	C to D-3
6	CL3 operation check	PWB-MC PJ24MC-14 (ON)	C to D-4
7	CL1 operation check	PWB-MC PJ14MC-3 (ON)	C to D-5 to 6
8	Change PWB-MC	—	—

15.3.3 Tray 2 take-up, Vertical Transport, Multiple Bypass take-up

A. Detection Timing

Type	Description
Tray 2 take-up, Vertical Transport mis-feed detection	The leading edge of the paper does not block the Tray 2 Vertical Transport Sensor (PC108) even after the lapse of a given period of time after the Tray 2 Paper Feed Motor has been energized.
	The Registration Roller Sensor (PC28) is not blocked even after the lapse of a given period of time after the paper has blocked the Tray 2 Vertical Transport Sensor (PC108).
Misfeed detected at Bypass	The leading edge of the paper does not block the Tray 2 Vertical Transport Sensor (PC108) even after the lapse of a given period of time after the Bypass Paper Feed Clutch has been energized.
Paper left at Tray 2 or Bypass	Tray 2 Vertical Transport Sensor (PC108) is blocked when the Main Power Switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.
Paper left at Tray 2	Tray 2 Paper Take-Up Sensor (PC107) is blocked when the Main Power Switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.
Misfeed detected as a result of delayed deactivation of sensor	The Tray 2 Vertical Transport Sensor (PC108) is not unblocked even after the lapse of a given period of time after it has been blocked by the paper.

B. Action

Tray 2 take-up, Vertical Transport

Relevant Electrical Parts			
Tray 2 Paper Take-Up Sensor (PC107) Tray 2 Vertical Transport Sensor (PC108) Registration Roller Sensor (PC28) Tray 2 Paper Feed Motor (M102)		Tray 2 Board (PWB-Z)	

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Initial check items	—	—
2	PC107 I/O check, Sensor check	PWB-Z PJ6Z-8 (ON)	T to U-26
3	PC108 I/O check, Sensor check	PWB-Z PJ6Z-11 (ON)	T to U-27
4	PC28 I/O check, Sensor check	PWB-MC PJ24MC-6 (ON)	C to D-3
5	M102 operation check	PWB-Z PJ5Z-1 to 4	T to U-22
6	Change PWB-Z	—	—

Manual Bypass take-up

Relevant Electrical Parts	
Tray 2 Vertical Transport Sensor (PC108) Bypass Paper Feed Clutch (CL101)	Tray 2 Board (PWB-Z)

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Initial check items	—	—
2	PC108 I/O check, Sensor check	PWB-Z PJ6Z-11 (ON)	T to U-27
3	CL101 operation check	PWB-Z PJ7Z-14 (ON)	T to U-24
4	Change PWB-Z	—	—

15.3.4 LCT Take-up and Vertical Transport Misfeed (PC-402)

A. Detection Timing

Type	Description
Misfeed detected at LCT take-up or Vertical Transport Section	The leading edge of the paper does not block the LCT Transport Roller Motor (PC2-LCT) even after the lapse of a given period of time after the Paper Feed Motor has been energized.
	The Tray 2 Vertical Transport Sensor (PC108) is not blocked even after the lapse of a given period of time after the paper has blocked the LCT Transport Roller Motor (PC2-LCT).
Paper left at LCT	The LCT Vertical Transport Sensor (PC2-LCT) is blocked when the Main Power Switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.
	The Paper Feed Sensor (PC1-LCT) is blocked when the Main Power Switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.
Misfeed detected as a result of delayed deactivation of sensor	The Tray 2 Vertical Transport Sensor (PC108) is not unblocked even after the lapse of a given period of time after it has been blocked by the paper.

B. Action

Relevant Electrical Parts	
Paper Feed Sensor (PC1-LCT) LCT Vertical Transport Sensor (PC2-LCT) Tray 2 Vertical Transport Sensor (PC108) Paper Feed Motor (M1-LCT)	Main Control Board (PWB-C1 LCT)

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Initial check items	—	—
2	PC1-LCT I/O check, Sensor check	PWB-C1 LCT PJ5C1 LCT-2	PC-402 C-7 to 8
3	PC2-LCT I/O check, Sensor check	PWB-C1 LCT PJ5C1 LCT-5	PC-402 C-7
4	PC108 I/O check, Sensor check	PWB-Z PJ6Z-11 (ON)	T to U-27
5	M1-LCT operation check	PWB-C1 LCT PJ6C1 LCT-1 to 4	PC-402 C-8
6	Change PWB-C1 LCT	—	—

15.3.5 Tray 3 Take-up and Vertical Transport Misfeed (PC-102/PC202)

A. Detection Timing

Type	Description
Misfeed detected at Tray 3 take-up or Vertical Transport Section	The leading edge of the paper does not block the Tray 3 Vertical Transport Sensor (PC117-PF) even after the lapse of a given period of time after the Tray 3 Paper Feed Motor has been energized.
	The Tray 2 Vertical Transport Sensor (PC108) is not blocked even after the lapse of a given period of time after the paper has blocked the Tray 3 Vertical Transport Sensor (PC117-PF).
Paper left at Tray 3	The Tray 3 Vertical Transport Sensor (PC117-PF) is blocked when the Main Power Switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.
	The Tray 3 Paper Take-Up Sensor (PC116-PF) is blocked when the Main Power Switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.
Misfeed detected as a result of delayed deactivation of sensor	The Tray 3 Vertical Transport Sensor (PC117-PF) is not unblocked even after the lapse of a given period of time after it has been blocked by the paper.

B. Action

Relevant Electrical Parts	
Tray 3 Paper Take-Up Sensor (PC116-PF) Tray 3 Vertical Transport Sensor (PC117-PF) Tray 2 Vertical Transport Sensor (PC108) Tray 3 Paper Feed Motor (M122-PF)	Main Control Board (PWB-C2 PF)

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Initial check items	—	—
2	PC116-PF I/O check, Sensor check	PWB-C2 PF PJ6C2PF-8 (ON)	PC-202 C-4
3	PC117-PF I/O check, Sensor check	PWB-C2 PF PJ6C2PF-11 (ON)	PC-202 C-4
4	PC108 I/O check, Sensor check	PWB-Z PJ6Z-11 (ON)	T to U-27
5	M122-PF operation check	PWB-C2 PF PJ5C2PF-1 to 4	PC-202 C-4
6	Change PWB-C2 PF	—	—

15.3.6 Tray 4 Take-up and Vertical Transport Misfeed (PC202)

A. Detection Timing

Type	Description
Misfeed detected at Tray 4 take-up or Vertical Transport Section	The leading edge of the paper does not block the Tray 4 Vertical Transport Sensor (PC126-PF) even after the lapse of a given period of time after the Tray 4 Paper Feed Motor has been energized.
	The Tray 3 Vertical Transport Sensor (PC117-PF) is not blocked even after the lapse of a given period of time after the paper has blocked the Tray 4 Vertical Transport Sensor (PC126-PF).
Paper left at Tray 4	The Tray 4 Vertical Transport Sensor (PC126-PF) is blocked when the Main Power Switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.
	The Tray 4 Paper Take-Up Sensor (PC125-PF) is blocked when the Main Power Switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.
Misfeed detected as a result of delayed deactivation of sensor	The Tray 4 Paper Take-Up Sensor (PC125-PF) is not unblocked even after the lapse of a given period of time after it has been blocked by the paper.

B. Action

Relevant Electrical Parts	
Tray 4 Paper Take-Up Sensor (PC125-PF) Tray 4 Vertical Transport Sensor (PC126-PF) Tray 3 Vertical Transport Sensor (PC117-PF) Tray 4 Paper Feed Motor (M123-PF)	Main Control Board (PWB-C2 PF)

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Initial check items	—	—
2	PC125-PF I/O check, Sensor check	PWB-C2 PF PJ10C2PF-8 (ON)	PC-202 G-6
3	PC126-PF I/O check, Sensor check	PWB-C2 PF PJ11C2PF-2 (ON)	PC-202 G-6
4	PC117-PF I/O check, Sensor check	PWB-C2 PF PJ6C2PF-11 (ON)	PC-202 C-4
5	M123-PF operation check	PWB-C2 PF PJ9C2PF-1 to 4	PC-202 G to H-6 to 7
6	Change PWB-C2 PF	—	—

15.3.7 Duplex Transport Misfeed

A. Detection Timing

Type	Description
Misfeed detected at Duplex Transport Section	The Registration Roller Sensor (PC28) is not blocked even after the lapse of a given period of time after a Duplex paper take-up sequence has been started.
	The Duplex Unit Transport Sensor 2 (PC1-DU) is not blocked even after the lapse of a given period of time after the paper has blocked the Duplex Unit Transport Sensor 1 (PI1-DU).
	The Duplex Unit Transport Sensor 1 (PI1-DU) is not unblocked even after the lapse of a given period of time after it has been blocked by the paper.
	The Duplex Unit Transport Sensor 2 (PC1-DU) is not unblocked even after the lapse of a given period of time after it has been blocked by the paper.
Paper left at Duplex Transport Section	Duplex Unit Transport Sensor 1 (PI1-DU) or Duplex Unit Transport Sensor 2 (PC1-DU) is blocked when the Main Power Switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

B. Action

Relevant Electrical Parts	
Registration Roller Sensor (PC28) Duplex Unit Transport Sensor 1 (PI1-DU) Duplex Unit Transport Sensor 2 (PC1-DU) Switchback Motor (M1-DU) Duplex Unit Transport Motor (M2-DU)	Duplex Control Board (PWB-A DU) Control Board (PWB-MC)

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Initial check items	—	—
2	PC28 I/O check, Sensor check	PWB-Z PJ6Z-11 (ON)	T to U-27
3	PI1-DU I/O check, Sensor check	—	Duplex Unit E-6
4	PC1-DU I/O check, Sensor check	—	Duplex Unit C-6
5	M1-DU operation check	PWB-A DU PJ3A-1 to 4	Duplex Unit C-5
6	M2-DU operation check	PWB-A DU PJ2A-1 to 4	Duplex Unit C-5
7	Change PWB-A DU	—	—
8	Change PWB-MC	—	—

15.3.8 Fusing/Exit Misfeed

A. Detection Timing

Type	Description
Misfeed detected at Fusing/Exit Section	PC30 is not unblocked even after the lapse of a given period of time after the paper has blocked the Exit Sensor (PC30).
	The Duplex Unit Transport Sensor 1 (PI1-DU) is not blocked even after the lapse of a given period of time after the Exit Sensor (PC30) has been unblocked by the paper during a switchback sequence.
Paper left at Exit Section	Exit Sensor (PC30) is blocked when the Main Power Switch is turned ON, a door or cover is opened and closed, or a misfeed or malfunction is reset.

B. Action

Relevant Electrical Parts	
Exit Sensor (PC30) Duplex Unit Transport Sensor 1 (PI1-DU)	Control Board (PWB-MC)

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Initial check items	—	—
2	PC30 I/O check, Sensor check	PWB-MC PJ24MC-12 (ON)	C~D-4
3	PI1 I/O check, Sensor check	—	Duplex Unit E-6
4	Change PWB-MC	—	—

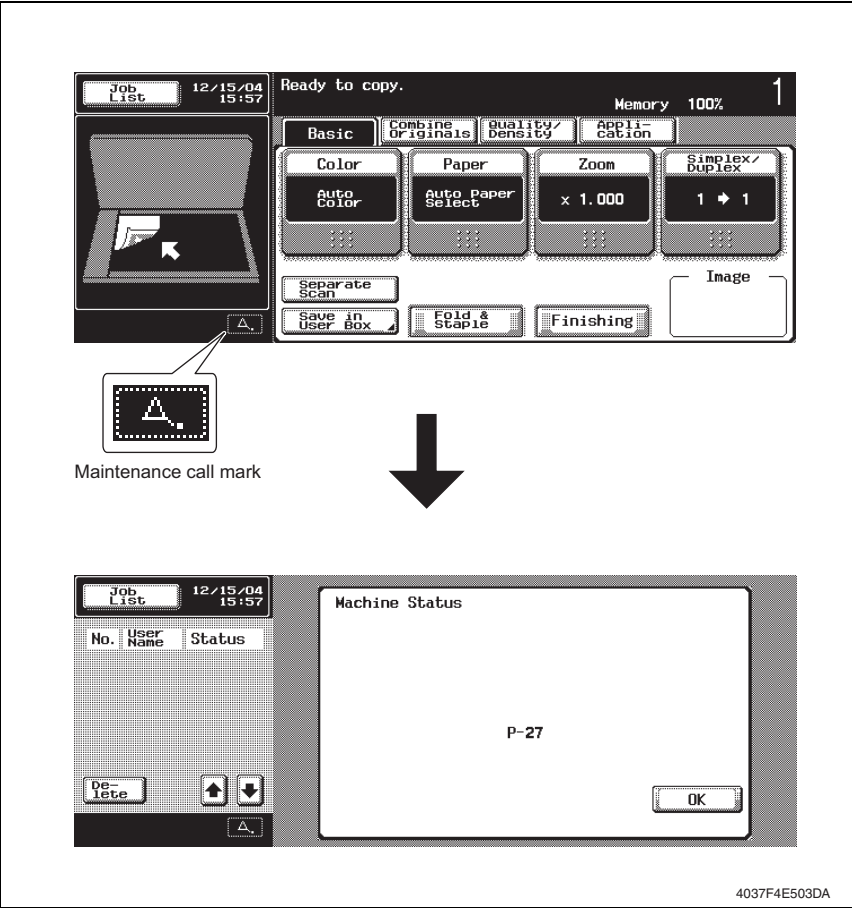
16. Malfunction code

16.1 Restarting

- This machine automatically performs a restarting sequence if a minor fault that would not damage the machine occurs during operation.
- No screen information is given for the restarting sequence.
- On completing the restarting sequence, the machine restores its operation to its ordinary condition.

16.2 Alert code

- The machine's CPU performs a self-diagnostics function that, on detecting a malfunction, gives the corresponding malfunction code and maintenance call mark on the Touch Panel.
- Touching the maintenance call mark will display the corresponding warning code on the State Confirm screen.



16.2.1 Alert list

- If an image stabilization or Scanner fault occurs, the corresponding warning code appears.

Code	Item	Description
S-1	CCD clamp gain adjustment failure	<ul style="list-style-type: none"> • It is detected that the CCD clamp gain adjustment value is faulty.
P-5	IDC Sensor (Front) failure	<ul style="list-style-type: none"> • The output from the photoreceiver of the IDC Sensor that takes a reading of a point of a bare surface on the Transfer Belt is 4.3 V or more during an adjustment of the IDC Sensor. • The output from the photoreceiver of the IDC Sensor that takes a reading of a point in a toner pattern on the Transfer Belt is 1.0 V or less after the adjustment has been completed.
P-28	IDC Sensor (Back) failure	
P-6	Cyan Imaging Unit failure	<ul style="list-style-type: none"> • All density readings taken from the density pattern produced on the Transfer Belt are 0.5 g/m² (IDC Sensor photoreceiver output) or less during max. density adjustment (Vg/Vdc adjustment).
P-7	Magenta Imaging Unit failure	
P-8	Yellow Imaging Unit failure	
P-9	Black Imaging Unit failure	
P-21	Color Shift Test Pattern failure	<ul style="list-style-type: none"> • The number of points detected in the main scan direction is more or less than the specified value during main scan direction registration correction. • The number of points detected in the Sub Scan Direction is more or less than the specified value during sub scan direction registration correction.
P-22	Color Shift Test Pattern failure	<ul style="list-style-type: none"> • The color shift amount is greater than the specified range during main scan direction registration correction. • The color shift amount is greater than the specified range during sub scan direction registration correction. • The skew correction amount is greater than the specified value.
P-26	ATVC (K) failure	<ul style="list-style-type: none"> • An abnormal average value is detected during an adjustment of the first image transfer ATVC value of Black.
P-27	ATVC (2nd) failure	<ul style="list-style-type: none"> • An abnormal average value is detected during an adjustment of the second image transfer ATVC value.
P-29	ATVC (color) failure	<ul style="list-style-type: none"> • An abnormal average value is detected during an adjustment of the first image transfer ATVC value of color.
P-30	Color PC Drum Main Sensor malfunction	<ul style="list-style-type: none"> • The output from the Color PC Drum Main and Sub Sensors remains unchanged for a continuous period of 1,000 ms while the Color PC Drum Motor is turning stably and the Lock signal is active (LOW-0).
P-31	K PC Drum Main Sensor malfunction	<ul style="list-style-type: none"> • The output from the Color PC Drum Main and Sub Sensors remains unchanged for a continuous period of 1,000 ms while the K PC Motor is turning stably and the Lock signal is active (LOW-0).

16.3 Solution

16.3.1 S-1: CCD clamp/gain adjustment failure

Relevant Electrical Parts	
Scanner Assy	CCD Sensor Board (PWB-A) Image Processing Board (PWB-C)

Step	Action
1	Correct the harness connection between PWB-A and PWB-C if faulty.
2	Check for possible extraneous light and correct as necessary.
3	Clean the lens, mirrors, CCD surface, and shading sheet if dirty
4	Correct reflective mirror of the Scanner if faulty, or change Scanner.
5	Change PWB-A.
6	Change PWB-C.

16.3.2 P-5: IDC Sensor (Front) failure

16.3.3 P-28 IDC Sensor (Back) failure

Relevant Electrical Parts	
IDC / Registration Sensor /1 (PC8) IDC / Registration Sensor /2 (PC9)	Control Board (PWB-MC) Image Transfer Belt Unit

Step	Action
1	Wipe clean the surface of the Transfer Belt with a soft cloth, if it is dirty
2	Change the Image Transfer Belt Unit if the Transfer Belt is damaged.
3	Reinstall or reconnect PC8 or PC9 if it is installed or connected improperly.
4	Clean PC8 or PC9 if it is dirty
5	Open and close the Left Door, run an image stabilization sequence, and select "State Confirmation" → "Level History 1" to check the IDC value. IDC1: PC8, IDC2: PC9 If the value is 1.0 V or less, change PC8 or PC9.
6	Change PWB-MC

16.3.4 P-6: Cyan Imaging Unit failure**16.3.5 P-7: Magenta Imaging Unit failure****16.3.6 P-8: Yellow Imaging Unit failure****16.3.7 P-9: Black Imaging Unit failure**

Relevant Electrical Parts	
Imaging Unit C Imaging Unit M Imaging Unit Y Imaging Unit K	Image Transfer Belt Unit

Step	Action
1	Select "Image Process Adjustment" → "D Max Density" and, if the setting value is negative, readjust.
2	Check the drive transmission portion of the Imaging Unit and correct as necessary.
3	Clean the IDC Sensor window if dirty
4	Clean the contact of the Imaging Unit connector if dirty
5	Change Imaging Unit.
6	Change the Image Transfer Belt Unit.

16.3.8 P-21: Color Shift Test Pattern failure

Relevant Electrical Parts	
Image Transfer Belt Unit	

Step	Action
1	Wipe clean the surface of the Transfer Belt with a soft cloth, if it is dirty
2	Change the Image Transfer Belt Unit if the Transfer Belt is damaged.

16.3.9 P-22: Color Shift Adjust failure

Relevant Electrical Parts	
IDC / Registration Sensor /1 (PC8)	IDC / Registration Sensor /2 (PC9)

Step	Action
1	Check the LED retraction lever for locked position and, if there is any faulty condition evident, slide out the Imaging Unit and reinstall it in position.
2	Reinstall or reconnect PC8 or PC9 if it is installed or connected improperly.
3	Check the Vertical Transport Guide for installed position and correct as necessary.

16.3.10 P-26: 1st image transfer ATVC (Black) failure**16.3.11 P-27: 2nd image transfer ATVC failure****16.3.12 P-29: 1st image transfer ATVC (Color) failure**

Relevant Electrical Parts	
High Voltage Unit/2 (HV2) Control Board (PWB-MC)	Image Transfer Belt Unit

Step	Action
1	Check the contact of the Transfer Belt Unit and that of HV2 for connection and clean or correct the contact as necessary.
2	Change the Image Transfer Belt Unit.
3	Change HV2.
4	Change PWB-MC.

16.3.13 P-30: Color PC Drum Sensor malfunction

Relevant Electrical Parts	
Color PC Drum Main Sensor (PC10) Color PC Drum Sub Sensor (PC35)	Control Board (PWB-MC)

Step	Action
1	Reinstall or reconnect PC10 or PC35 if it is installed or connected improperly.
2	Clean PC10 or PC35 if it is dirty
3	Open and close the Left Door to reset the fault.
4	If P-30 occurs again, change PC10 or PC35.
5	Change PWB-MC.

16.3.14 P-31: Black PC Drum Sensor malfunction

Relevant Electrical Parts	
K PC Drum Main Sensor (PC11) K PC Drum Sub Sensor (PC36)	Control Board (PWB-MC)

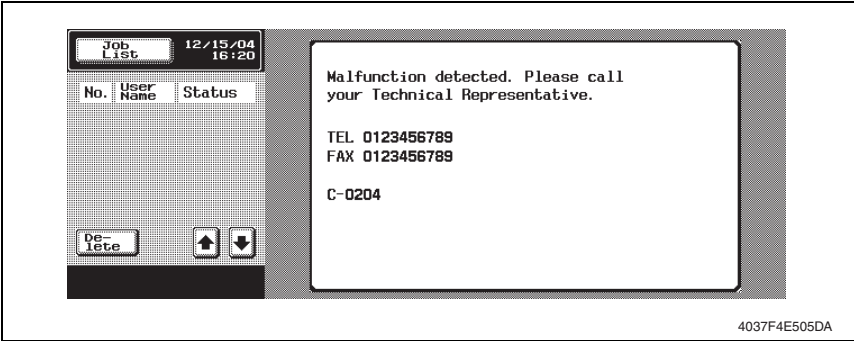
Step	Action
1	Perform the faulty sensor check procedure *1.
2	Check the sensor, for which a faulty condition has been checked, for installed position and proper connector connection.
3	Wipe the sensor, for which a faulty condition has been checked, clean of dirt if any.
4	If P-31 persists, change the sensor which was found faulty.
5	Change PWB-MC.

*1: Faulty sensor check procedure

1. Open the Front Door and turn ON the Main Power Switch of the machine.
2. Call the "Sensor Check" screen to the screen by way of Service Mode.
3. Close the Front Door and start "Stabilizer."
4. During the Stabilizer sequence, check to see if the values of the phase detection sensors (Color PC Drum Main/Sub and K PC Drum Main/Sub Sensors) change.
5. A sensor is faulty if its value does not change.

16.4 Trouble code

- The machine's CPU performs a self-diagnostics function that, on detecting a malfunction, gives the corresponding malfunction code and maintenance call mark on the Touch Panel.




16.4.1 Trouble code list

* For the details of the malfunction codes of the options, see the Service Manual for the corresponding option.

Code	Item	Description	Rank
C0001	LCT communications error	See PC-402 Service Manual.	B
C0102	LCT Vertical Transport Motor malfunction		B
C0204	Tray 2 Elevator failure	<ul style="list-style-type: none"> The Lift-up Sensor is not blocked even after the lapse of a given period of time after the lifting motion has been started. 	B
C0206	Tray 3 Elevator failure	See PC-102/PC-202 Service Manual.	B
C0208	Tray 4 Elevator failure		B
C0209	LCT Elevator Motor malfunction (Elevator malfunction)	See PC-402 Service Manual.	B
C0210	LCT ascent motion failure		B
C0211	Bypass lifting motion failure	<ul style="list-style-type: none"> The Bypass Lift-up Sensor is not blocked even when the Tray 2 Vertical Transport Motor has turned for a given number of pulses after the sequence to move the Paper Lifting Plate from the standby position to the take-up position was started. The Bypass Lift-up Sensor is not unblocked even when the Tray 2 Vertical Transport Motor has turned for a given number of pulses after the sequence to move the Paper Lifting Plate from the take-up position to the standby position was started. 	B
C0212	LCT Shift Motor malfunction	See PC-402 Service Manual.	B
C0213	LCT shifting failure		B
C0214	LCT ejection failure		B
C0215	LCT Shift Gate malfunction		B

Code	Item	Description	Rank
C0301	Suction Fan Motor's failure to turn	• The Fan Lock signal remains HIGH for a predetermined continuous period of time while the Motor remains stationary.	B
C0351	Paper Cooling Fan Motor's failure to turn	• The Fan Lock signal remains HIGH for a predetermined continuous period of time while the Motor remains stationary.	B
C1180	Finishing option transport system malfunction	☞ See FS-507or FS-603 Service Manual.	B
C1181	Finishing option Paddle Motor malfunction		B
C1182	Finishing option Shift Motor mechanism malfunction		B
C1183	Finishing option Elevator drive malfunction		B
C1190	Finishing option Aligning Bar moving mechanism malfunction		B
C1192	Finishing option Front Aligning Motor malfunction		B
C1193	Finishing option Rear Aligning Motor malfunction		B
C11A1	Finishing option Exit Roller pressure/retraction failure		B
C11A2	Finishing option Storage Roller pressure/retraction failure		B
C11A4	Finishing option Exit Motor malfunction		B
C11B0	Finishing option Stapler Unit CD drive failure		B
C11B1	Finishing option Stapler Unit Slide Motor malfunction		B
C11B2	Finishing option stapling mechanism malfunction 1		B
C11B3	Finishing option stapling mechanism malfunction 2		B
C11B4	Finishing option Staple/Folding Motor malfunction		B
C11C0	Punch Motor malfunction		B
C11C1	Finishing option Punch Cam Motor drive failure		C
C11C2	Finishing option Punch Unit Board malfunction		C
C11C3	Finishing option Punch Side Registration Motor malfunction		C
C11C4	Finishing option Punch Motor malfunction		C
C11C5	Finishing option Punch Sensor malfunction		C


Code	Item	Description	Rank
C1401	Finishing option Backup RAM failure	 See FS-507or FS-603 Service Manual.	B
C2151	2nd Image Transfer Roller pressure/retraction failure	<ul style="list-style-type: none"> The 2nd Image Transfer Pressure Position Sensor is not activated (retracted position) within 2 sec. after the 2nd Image Transfer Pressure/Retraction Motor has started turning during a sequence of the 2nd Image Transfer Roller's retracting motion. The 2nd Image Transfer Pressure Position Sensor is not deactivated (pressed position) within 2 sec. after the 2nd Image Transfer Pressure/Retraction Motor has started turning during a sequence of the 2nd Image Transfer Roller's pressing motion. 	B
C2152	Image Transfer Belt pressure/retraction failure	<ul style="list-style-type: none"> The 1st Image Transfer Retraction Position Sensor is not activated (retracted position) within 5 sec. after the 1st Image Transfer Pressure/Retraction Motor has started turning during a sequence of the Transfer Belt's retracting motion. The 1st Image Transfer Retraction Position Sensor is not deactivated (pressed position) within 1 sec. after the 1st Image Transfer Pressure/Retraction Motor has started turning during a sequence of the Transfer Belt's pressing motion. 	B
C2160	Cyan PC Drum Charge Corona malfunction	<ul style="list-style-type: none"> An output is automatically produced from the PC Drum Charge Corona of each color when the malfunction resetting procedure is performed after C2164 (PC Drum Charge Corona malfunction) has been detected. The SCD signal is detected for a continuous 0.5-sec. period at this time. 	B
C2161	Magenta PC Drum Charge Corona malfunction		B
C2162	Yellow PC Drum Charge Corona malfunction		B
C2163	Black PC Drum Charge Corona malfunction		B
C2164	PC Drum Charge Corona malfunction	<ul style="list-style-type: none"> The SCD signal is detected for a continuous 0.5-sec. period while the PC Drum Charge Corona is being energized. 	B
C2251	K PC Motor's failure to turn	<ul style="list-style-type: none"> The Motor Lock signal remains HIGH for a predetermined continuous period of time while the Motor is turning. 	B
C2252	K PC Motor's turning at abnormal timing	<ul style="list-style-type: none"> The Motor Lock signal remains LOW for a predetermined continuous period of time while the Motor remains stationary. 	B
C2253	Color PC Drum Motor's failure to turn	<ul style="list-style-type: none"> The Motor Lock signal remains HIGH for a predetermined continuous period of time while the Motor is turning. 	BB
C2254	Color PC Drum Motor's turning at abnormal timing	<ul style="list-style-type: none"> The Motor Lock signal remains LOW for a predetermined continuous period of time while the Motor remains stationary. 	B
C2255	Color Developing Motor's failure to turn	<ul style="list-style-type: none"> The Motor Lock signal remains HIGH for a predetermined continuous period of time while the Motor is turning. 	B
C2256	Color Developing Motor's turning at abnormal timing	<ul style="list-style-type: none"> The Motor Lock signal remains LOW for a predetermined continuous period of time while the Motor remains stationary. 	B

Code	Item	Description	Rank
C2257	Cleaning Brush Motor failure to turn	• The Motor Lock signal remains HIGH for a predetermined continuous period of time while the Motor is turning.	B
C2258	Cleaning Brush Motor's turning at abnormal timing	• The Motor Lock signal remains LOW for a predetermined continuous period of time while the Motor remains stationary.	B
C2351	Toner Suction Fan Motor/K's failure to turn	• The Motor Lock signal remains HIGH for a predetermined continuous period of time while the Motor is turning.	B
C2352	Toner Suction Fan Motor's failure to turn	• The Fan Lock signal remains HIGH for a predetermined continuous period of time while the Motor remains stationary.	B
C2451	New Transfer Belt Unit resetting failure	• A new installation is not detected when a new Transfer Cleaner Unit (Image Transfer Belt Unit) is installed.	B
C2551	Abnormally low toner density detected Cyan TCR Sensor	• T/C 0.21 % or less is detected ten consecutive times in the Developing Unit as validated through the toner replenishing amount determination control.	B
C2552	Abnormally high toner density detected Cyan TCR Sensor	• T/C 15.5 % or more is detected ten consecutive times in the Developing Unit as validated through the toner replenishing amount determination control.	B
C2553	Abnormally low toner density detected Magenta TCR Sensor	• T/C 0.21 % or less is detected ten consecutive times in the Developing Unit as validated through the toner replenishing amount determination control.	B
C2554	Abnormally high toner density detected Magenta TCR Sensor	• T/C 15.5 % or more is detected ten consecutive times in the Developing Unit as validated through the toner replenishing amount determination control.	B
C2555	Abnormally low toner density detected Yellow TCR Sensor	• T/C 0.21 % or less is detected ten consecutive times in the Developing Unit as validated through the toner replenishing amount determination control.	B
C2556	Abnormally high toner density detected Yellow TCR Sensor	• T/C 15.5 % or more is detected ten consecutive times in the Developing Unit as validated through the toner replenishing amount determination control.	B
C2557	Abnormally low toner density detected Black TCR Sensor	• T/C 3 % or less is detected ten consecutive times in the Developing Unit as validated through the toner replenishing amount determination control.	B
C2558	Abnormally high toner density detected Black TCR Sensor	• T/C 12 % or more is detected ten consecutive times in the Developing Unit as validated through the toner replenishing amount determination control.	B


Code	Item	Description	Rank
C2559	Cyan TCR Sensor adjustment failure	<ul style="list-style-type: none"> TCR Sensor automatic adjustment does not function properly, failing to adjust to an appropriate value. 	B
C255A	Magenta TCR Sensor adjustment failure		B
C255B	Yellow TCR Sensor adjustment failure		B
C255C	Black TCR Sensor adjustment failure		B
C2651	Cyan Imaging Unit EEPROM access error	<ul style="list-style-type: none"> A condition of "EEPROM is not connected" or "There is an access error" is detected in EEPROM of the Imaging Unit. 	C
C2652	Magenta Imaging Unit EEPROM access error		C
C2653	Yellow Imaging Unit EEPROM access error		C
C2654	Black Imaging Unit EEPROM access error		C
C2655	Cyan LPH correction data download failure	<ul style="list-style-type: none"> An error is detected while the LPH correction data is being downloaded from EEPROM of LPH to PWB-MFPC when the Main Power Switch is turned ON. 	C
C2656	Magenta LPH correction data download failure		C
C2657	Yellow LPH correction data download failure		C
C2658	Black LPH correction data download failure		C
C3101	Fusing Pressure Roller pressure/retraction failure	<ul style="list-style-type: none"> No change is observed in the encoder sensor pulse even after the lapse of 0.5 sec. after the Fusing Pressure/Retraction Motor has started turning for a sequence of the Fusing Pressure Roller's retracting motion. No change is observed in the encoder sensor pulse even after the lapse of 0.5 sec. after the Fusing Pressure/Retraction Motor has started turning for a sequence of the Fusing Pressure Roller's pressing motion. The Fusing Pressure Position Sensor is not activated (pressed position) even when 30 encoder sensor pulses are counted after the Fusing Pressure/Retraction Motor has started turning for a sequence of the Fusing Pressure Roller's pressing motion. 	B
C3201	Fusing Drive Motor's failure to turn	<ul style="list-style-type: none"> The Fan Lock signal remains HIGH for a predetermined continuous period of time while the Motor remains stationary. 	B
C3202	Fusing Drive Motor turning at abnormal timing	<ul style="list-style-type: none"> The Motor Lock signal remains LOW for a predetermined continuous period of time while the Motor remains stationary. 	B
C3301	Fusing Cooling Fan Motor/1 failure to turn	<ul style="list-style-type: none"> The Fan Lock signal remains HIGH for a predetermined continuous period of time while the Motor remains stationary. 	B


Code	Item	Description	Rank
C3302	Fusing Cooling Fan Motor/1 or Fusing Cooling Fan Motor/2 failure to turn	<ul style="list-style-type: none"> The Fan Lock signal remains HIGH for a predetermined continuous period of time while the Motor remains stationary. 	B
C3451	Heating Roller warm-up failure	<ul style="list-style-type: none"> The temperature of the Heating Roller does not reach 100 °C within 50 sec. after the Heating Roller Heater Lamp has been turned ON. The temperature of the Heating Roller does not reach 100 °C and that of the Fusing Pressure Roller does not reach 195 °C within 200 sec. after the Heating Roller Heater Lamp has been turned ON. The voltage of the Heating Roller Thermistor does not increase by five steps within 20 sec. after the Heating Roller Heater Lamp has been turned ON. No zero cross signal is detected even with the lapse of 1 sec. or more after the Heating Roller Heater Lamp has been turned ON. 	A
C3452	Fusing Pressure Roller warm-up failure	<ul style="list-style-type: none"> The voltage of the Fusing Pressure Roller Thermistor does not increase by five steps within 20 sec. after the predrive of the Fusing Roller has been started during a warm-up cycle. 	A
C3461	New Fusing Unit resetting failure	<ul style="list-style-type: none"> A new installation is not detected when a new Fusing Unit is installed. 	B
C3751	Heating Roller abnormally high temperature	<ul style="list-style-type: none"> A temperature of 225 °C or more of the Heating Roller is detected for 1 sec. or more. 	A
C3752	Fusing Pressure Roller abnormally high temperature	<ul style="list-style-type: none"> A temperature of 190 °C or more of the Fusing Pressure Roller is detected for 1 sec. or more before the start of the heater temperature control. A temperature of 215 °C or more of the Fusing Pressure Roller is detected for 1 sec. or more after the start of the heater temperature control. 	A
C3851	Heating Roller abnormally low temperature	<ul style="list-style-type: none"> No zero cross signal is detected even with the lapse of 1 sec. or more during a standby state, print cycle, or Power Save. A temperature of 120 °C or less of the Heating Roller is detected for 1 sec. or more during a standby state. A temperature of 120 °C or less of the Heating Roller is detected for 1 sec. or more during a print cycle. A temperature of 70 °C or less of the Heating Roller is detected for 1 sec. or more during Power Save. 	A
C3852	Fusing Pressure Roller abnormally low temperature	<ul style="list-style-type: none"> A temperature of 80 °C or less of the Fusing Pressure Roller is detected for 1 sec. or more during a standby state. A temperature of 80 °C or less of the Fusing Pressure Roller is detected for 1 sec. or more during a print cycle. A temperature of 80 °C or less of the Fusing Pressure Roller is detected for 1 sec. or more during Power Save. 	A

Code	Item	Description	Rank
C4705	Printer Time Out	• No image data is output from the MFP Control Board (PWB-MFPC).	C
C4761	Compression hardware timeout	• The hardware involved with the compression function offered by the MFP Control Board (PWB-MFPC) does not respond.	C
C4765	Extraction hardware timeout	• The hardware involved with the extraction function offered by the MFP Control Board (PWB-MFPC) does not respond.	C
C4770	JBIG0 Error	• Memory of the MFP Control Board (PWB-MFPC) is faulty.	C
C4771	JBIG1 Error		C
C4772	JBIG2 Error		C
C4773	JBIG3 Error		C
C4780	Compressor 0 command buffer stop failure	• The MFP Control Board (PWB-MFPC) is faulty.	C
C4781	Compressor 1 command buffer stop failure		C
C4782	Compressor 2 command buffer stop failure		C
C4783	Compressor 3 command buffer stop failure		C
C5102	Main Motor's failure to turn	• The Motor Lock signal remains HIGH for a predetermined continuous period of time while the Motor is turning.	B
C5103	Main Motor turning at abnormal timing	• The Motor Lock signal remains LOW for a predetermined continuous period of time while the Motor remains stationary.	B
C5351	Power Supply Cooling Fan Motor's failure to turn	• The Fan Lock signal remains HIGH for a predetermined continuous period of time while the Motor remains stationary.	B
C5353	Cooling Fan Motor 2's failure to turn	• The Fan Lock signal remains HIGH for a predetermined continuous period of time while the Motor remains stationary.	B
C5354	Ozone Ventilation Fan Motor's failure to turn	• The Fan Lock signal remains HIGH for a predetermined continuous period of time while the Motor remains stationary.	B
C5355	Cooling Fan Motor 3's failure to turn	• The Fan Lock signal remains HIGH for a predetermined continuous period of time while the Motor remains stationary.	B
C5356	Cooling Fan Motor 1's failure to turn	• The Fan Lock signal remains HIGH for a predetermined continuous period of time while the Motor remains stationary.	B
C5370	MFP Control Board Cooling Fan Motor's failure to turn	• The Fan Lock signal remains HIGH for a predetermined continuous period of time while the Motor remains stationary.	C

Code	Item	Description	Rank
C6102	Scanner Home Sensor malfunction	<ul style="list-style-type: none"> The Scanner Home Sensor is unable to detect the Scanner located at its home position. The Scanner Home Sensor is unable to detect a Scanner even when the Scanner Motor has been driven to move the Scanner over the maximum traveling distance. The Scanner Home Sensor detects the Scanner when the Scanner has moved 5 mm from the position, at which it blocks the Scanner Home Sensor. 	B
C6103	Scanner overrun failure	<ul style="list-style-type: none"> The Scanner Home Sensor detects the Scanner at its home position during a period of time that begins with the time when a prescan command and a scan preparation command are executed and ends when a home return command is executed. 	B
C6301	Scanner Cooling Fan Motor's failure to turn	<ul style="list-style-type: none"> The Fan Lock signal remains HIGH for a predetermined continuous period of time while the Motor remains stationary. 	B
C6704	Scanner Time Out	<ul style="list-style-type: none"> Image data is not input from the Image Processing Board (PWB-C) to the MFP Control Board (PWB-MFPC). 	C
C6751	CCD clamp/gain adjustment failure	<ul style="list-style-type: none"> The adjustment value is 0 or 255 during a CCD clamp adjustment. The peak value of the output data is 64 or less during a CCD gain adjustment. 	B
C9401	Exposure Lamp's failure to turn ON	<ul style="list-style-type: none"> The output from the CCD Sensor is a predetermined value or less during CCD Sensor gain adjustment. 	A
C9402	Exposure Lamp turning ON at abnormal timing	<ul style="list-style-type: none"> The average output value of the CCD Sensor with the Scanner at its standby position is a predetermined value or more at the end of a scan job. 	A
CA051	Standard controller configuration failure	<ul style="list-style-type: none"> The controller of the MFP Control Board (PWB-MFPC) is faulty. 	C
CA052	Controller hardware error	<ul style="list-style-type: none"> A controller hardware error is detected in the network I/F. 	C
CA053	Controller start failure	<ul style="list-style-type: none"> A controller start failure is detected in the controller interface. 	C
CB001	FAX Board Error 1	 See FK-502 Service Manual.	C
CB002	FAX Board Error 2		C
CB003	FAX Board Error 3		C
CB051	FAX Board mount failure 1		C
CB052	FAX Board mount failure 2		C
CB110	FAX Driver Error: Instance Generation Error or Observer Registration Error		C
CB111	FAX Driver Error: Configuration Space Initialization NG		C
CB112	FAX Driver Error: Semaphore Acquisition, Release Error		C

Code	Item	Description	Rank
CB113	FAX Driver Error: Sequence Error among Main Body Tasks	See FK-502 Service Manual.	C
CB114	FAX Driver Error: Message Queue Control Error		C
CB115	FAX Driver Error: Main Body - Sequence Error among FAX Boards		C
CB116	FAX Driver Error: FAX Board Nonresponse (Nonresponse after Initialization)		C
CB117	FAX Driver Error: ACK Waiting Timeout Error		C
CB118	FAX Driver Error: Receiving Undefined Frame		C
CB119	FAX Driver Error: DMA Transfer Error		C
CB120	JC Soft Error		C
CB122	Device Error (GA LOCAL SRAM)		C
CB123	Device Error (DRAM)		C
CB125	Device Error (GA)		C
CB126	Timeout Error due to Nonresponse from DC during Suspension Process		C
CB127	Timeout Error due to Nonresponse from CC during Suspension Process		C
CB128	Timeout Error due to Nonresponse from LINE during Suspension Process		C
CB129	Timeout Error due to Nonresponse from File System/File Driver during Suspension Process		C
CB130	MIF Driver Error: Driver Soft Error		C
CB131	MIF Driver Error: Reception Frame Length Error from Main		C
CB132	MIF Driver Error: Reception Frame Header Error from Main		C
CB133	MIF Driver Error: 232C i/f Sequence Error		C
CB134	MIF Driver Error: DPRAM i/f Sequence Error		C
CB135	MIF Driver Error: DPRAM CTL/STL Register Error		C
CB136	MIF Driver Error: AKC Waiting Timeout		C

Code	Item	Description	Rank
CB137	MIF Driver Error: DPRAM RESET Reception	 See FK-502 Service Manual.	C
CB140	MSG I/F Error with JC		C
CB141	I/F Error with Main: I/F Error with Driver		C
CB142	I/F Error with Main: Undefined Command Reception		C
CB143	I/F Error with Main: Command Frame Length Error		C
CB144	I/F Error with Main: Command Parameter Length Error		C
CB145	I/F Error with Main: Undefined Parameter		C
CB146	I/F Error with Main: Command/Response Sequence Error		C
CB150	Line Control: External Class Instance Acquisition Error		C
CB151	Line Control: Job Start Error (Starting Job Parameter Error/Child Job Generation Error)		C
CB152	Line Control: Doc Access Error (Report Buf Access Error)		C
CB153	Line Control: Response Wait Timeout from External Task		C
CB154	Line Control: Internal Que Table Control Error (create/enque/deque)		C
CB160	1 Destination Control: Instance Generation Error		C
CB161	1 Destination Control: Timeout Error		C
CB162	1 Destination Control: Interface Error		C
CB163	1 Destination Control: Message Que Control Error		C
CB164	1 Destination Control: Semaphore Acquisition Release Error		C
CB165	1 Destination Control: Observer Registration Error		C
CB166	1 Destination Control: Reception Resource Check Error		C
CB167	1 Destination Control: Deployment Error of Sending Image Information		C
CB168	1 Destination Control: Serialization Error of Receiving Image		C
CB169	1 Destination Control: Access Error to Quick Memory Data		C

Code	Item	Description	Rank
CB170	Page Control: Internal Que Table Control Error (create/enque/deque)	 See FK-502 Service Manual.	C
CB171	Page Control: Instance Generation Error		C
CB172	Page Control: Timeout Error		C
CB173	Page Control: Interface Error		C
CB174	Page Control: Semaphore Acquisition Release Error		C
CB175	Page Control: Observer Registration Error		C
CB176	Page Control: Unable to Check TTI Domain		C
CB177	Page Control: Error Return from TTI Rasterizer		C
CB178	Page Control: Receiving Job Generation Error		C
CB185	Page Control: Receiving Data Size Logic Error (Receiving Data are not Multiples of DotLine)		C
CB186	Page Control: ImageBuf Acquisition (alloc) Error		C
CB187	Page Control: Error Return from Compressor		C
CB188	Page Control: BandBuf Control Error (newInstance/get/free)		C
CC001	Vendor connection failure	<ul style="list-style-type: none"> It is detected that communications with the vendor are interrupted for a given period of time or more with "Installed" selected for the setting of vendor installation. 	C
CC151	ROM contents error upon startup (MSC)	<ul style="list-style-type: none"> A fault is detected in a sequence of ROM contents check of the MSC (PWB-MFPC) during starting 	C
CC152	ROM contents error upon startup (Scanner)	<ul style="list-style-type: none"> A fault is detected in a sequence of ROM contents check of the PWB-C during starting. 	C
CC153	ROM contents error upon startup (PRT)	<ul style="list-style-type: none"> A fault is detected in a sequence of ROM contents check of the Control Board during starting. 	C
CC154	ROM contents error upon startup (LPH)	<ul style="list-style-type: none"> A fault is detected in a sequence of ROM contents check of the LPH Board during starting. 	C
CC163	ROM contents error (PRT)	<ul style="list-style-type: none"> The wrong model of firmware is detected in the engine during the initial connection to the engine is being checked. 	C
CD002	JOB RAM save error	<ul style="list-style-type: none"> The error in save of JOB data to the Memory/ Hard Disk and its read error are detected. 	C
CD004	Hard disk access error	<ul style="list-style-type: none"> Unable to communicate between the hard disk and MFP Control Board (PWB-MFPC). 	C

Code	Item	Description	Rank
CD005	Hard Disk Error 1	• Hard disk is faulty.	C
CD006	Hard Disk Error 2		C
CD007	Hard Disk Error 3		C
CD008	Hard Disk Error 4		C
CD009	Hard Disk Error 5		C
CD00A	Hard Disk Error 6		C
CD00B	Hard Disk Error 7		C
CD00C	Hard Disk Error 8		C
CD00D	Hard Disk Error 9		C
CD00E	Hard Disk Error A		C
CD00F	Hard disk data transfer error	• Data transfer from the hard disk is faulty.	C
CD010	Hard disk unformat	• Unformatted hard disk is connected.	C
CD011	Hard disk specifications error	• A hard disk that falls outside the specifications is connected.	C
CD012	Encryption ASIC setting error	• Initialization error of the encrypted ASIC is detected during the machine is starting.	
CD013	Encryption ASIC mounting error	• The faulty of the installation of encrypted ASIC is detected during the machine is starting.	
CD201	File Memory mounting error	• The File Memory mounted on the MFP Control Board (PWB-MFPC) is faulty.	C
CD202	Memory capacity discrepancy	• The capacity of the File Memory mounted on the MFP Control Board (PWB-MFPC) is short.	C
CD211	PCI-SDRAM DMA operation failure	• The hardware involved with image transfer in the memory of the MFP Control Board (PWB-MFPC) does not respond.	C
CD212	Compression/extraction timeout detection	• The hardware involved with the BTC compression function offered by the MFP Control Board (PWB-MFPC) does not respond.	C
CD221	NVRAM initialization failure	• Call responsible person of Develop.	-
CD222			-
CD223			-
CDCXX	• Call responsible person of Develop.		-
CE002	Message and Method parameter failure	• Unspecified data or parameter is detected.	C
CEEE1	MSC undefined malfunction occurring	• An undefined malfunction occurs in the MSC of the MFP Control Board (PWB-MFPC).	C
CEEE2	Scanner Section undefined malfunction	• An undefined malfunction occurs in the Scanner Section.	C
CEEE3	Engine Section undefined malfunction	• An undefined malfunction occurs in the Engine Section (PWB-MC, etc.).	C

- The machine displays an abort code (CFXXX) on the Touch Panel as it becomes unable to process tasks properly through its software control.
- When the system program is aborted, check the electrical component, unit, option, and connection relating to the specific type of the abort condition.

Code	Item	Relevant Electrical Components, Units, and Options	Rank
CF001	CT_SingleList Table Abnormal	• MFP Control Board/Electronic sorting Board	C
CF002	CT_DoubleList Table Abnormal	• MFP Control Board/Electronic sorting Board	C
CF003	CT_DoubleList Table Abnormal	• MFP Control Board/Electronic sorting Board	C
CF004	CT_Queue Full Abnormal	• MFP Control Board/Electronic sorting Board	C
CF011	ArrayLink Abnormal	• MFP Control Board/Electronic sorting Board	C
CF012	FAT Link Abnormal	• MFP Control Board/Electronic sorting Board	C
CF013	File Size Abnormal	• MFP Control Board/Electronic sorting Board	C
CF021	setDelayMessage Table OverFlow	• MFP Control Board/Electronic sorting Board	C
CF022	procSetBootParamTcpipAddress() injustice	• MFP Control Board/Electronic sorting Board	C
CF023	MsgQue OverFlow	• MFP Control Board/Electronic sorting Board	C
CF031	getJobPageToIPE() page number injustice	• MFP Control Board/Electronic sorting Board	C
CF032	getJobHDDPageToIPE() page number injustice	• MFP Control Board/Electronic sorting Board	C
CF033	setDivTbl() limitation over	• MFP Control Board/Electronic sorting Board	C
CF034	HDDQUEUE Over Flow	• MFP Control Board/Electronic sorting Board	C
CF041	getAPPPtrFromAPPID() abnormal	• MFP Control Board/Electronic sorting Board	C
CF042	getAPPIndexFromAPPID() abnormal	• MFP Control Board/Electronic sorting Board	C
CF051	CC_InputPageEntry:operator[] page injustice	• MFP Control Board/Electronic sorting Board	C
CF061	IdeCommand_Set() status Abnormal	• MFP Control Board/Electronic sorting Board	C
CF062	IdeCommand_Set() parameter Abnormal	• MFP Control Board/Electronic sorting Board	C
CF091	PCI ASIC1 ERROR	• MFP Control Board/Electronic sorting Board	C
CF092	PCI ASIC2 ERROR	• MFP Control Board/Electronic sorting Board	C
CF093	PCI ASIC4 ERROR	• MFP Control Board/Electronic sorting Board	C
CF101	SCAN TIME OUT	• MFP Control Board/Electronic sorting Board	C
CF111	Compress TIME OUT	• MFP Control Board/Electronic sorting Board	C
CF112	Compress Table OverFlow	• MFP Control Board/Electronic sorting Board	C
CF113	Compress Table check	• MFP Control Board/Electronic sorting Board	C
CF121	Expand TIME OUT	• MFP Control Board/Electronic sorting Board	C
CF122	Expand Table OverFlow	• MFP Control Board/Electronic sorting Board	C
CF123	Expand ExpandLine Abnormal	• MFP Control Board/Electronic sorting Board	C
CF131	Print TIME OUT	• MFP Control Board/Electronic sorting Board	C
CF201	startIRReadAnd Compress()Sequence	• MFP Control Board/Electronic sorting Board	C

Code	Item	Relevant Electrical Components, Units, and Options	Rank
CF202	startWorkSave()Sequence Abnormal	• MFP Control Board/Electronic sorting Board	C
CF203	convAPItoIJCParameter()page Abnormal	• MFP Control Board/Electronic sorting Board	C
CF204	calcCompressorUse()CmpExpID Abnormal	• MFP Control Board/Electronic sorting Board	C
CF211	setParameterBandColorPlane() Table OverFlow	• MFP Control Board/Electronic sorting Board	C
CF212	convAPItoIJCParameter()page Abnormal	• MFP Control Board/Electronic sorting Board	C
CF213	calcExpandUse() CmpExpID Abnormal	• MFP Control Board/Electronic sorting Board	C
CF221	startPrintOutput outputsize zero	• MFP Control Board/Electronic sorting Board	C
CF222	Next request comes during processing of startPrintOutput ()	• MFP Control Board/Electronic sorting Board	C
CF223	Next request comes during processing of startWorkLoadOutput ()	• MFP Control Board/Electronic sorting Board	C
CF300	IR Bus Check Timeout	• MFP Control Board/Copier Board	C
CF411	Parity error	• MFP Control Board/Copier Board	C
CF421	Overrun error	• MFP Control Board/Copier Board	C
CF431	Parity error + Overrun error	• MFP Control Board/Copier Board	C
CF441	Framing error	• MFP Control Board/Copier Board	C
CF451	Parity error + Framing error	• MFP Control Board/Copier Board	C
CF461	Overrun error + Framing error	• MFP Control Board/Copier Board	C
CF471	Parity error + Overrun error + Framing error	• MFP Control Board/Copier Board	C
CF412	Parity error	• MFP Control Board/Copier Board	C
CF422	Overrun error	• MFP Control Board/Copier Board	C
CF432	Parity error + Overrun error	• MFP Control Board/Copier Board	C
CF442	Framing error	• MFP Control Board/Copier Board	C
CF452	Parity error + Framing error	• MFP Control Board/Copier Board	C
CF462	Overrun error + Framing error	• MFP Control Board/Copier Board	C
CF472	Parity error + Overrun error + Framing error	• MFP Control Board/Copier Board	C
CF510	Parity error	• MFP Control Board/Copier Board	C
CF520	Framing error	• MFP Control Board/Copier Board	C
CF530	Parity error + Framing error	• MFP Control Board/Copier Board	C
CF540	Overrun error	• MFP Control Board/Copier Board	C
CF550	Parity error + Overrun error	• MFP Control Board/Copier Board	C
CF560	Overrun error + Framing error	• MFP Control Board/Copier Board	C
CF570	Parity error + Overrun error + Framing error	• MFP Control Board/Copier Board	C
CF580	Frame distortion of ADF	• MFP Control Board/Copier Board	C

Code	Item	Relevant Electrical Components, Units, and Options	Rank
CF600	Report receiving of print start that is out of sequence	• MFP Control Board/Engine	C
CF601	Report receiving of paper feeding that is out of sequence	• MFP Control Board/Engine	C
CF604	Outside IF/Command Queue	• MFP Control Board	C
CF614	"Output sequence" Queue	• MFP Control Board	C
CF624	Panel LCD date Queue	• MFP Control Board/Copier Board	C
CF704	Common data "Delete-waiting HDD accumulated job ID" Queue	• MFP Control Board/Electronic sorting Board	C
CF714	IRC/Command Queue	• MFP Control Board/Copier Board	C
CF724	Engine/Command Queue	• MFP Control Board/Engine	C
CF734	Panel/Command Queue	• MFP Control Board/Copier Board/Control Panel	C
CF744	File Memory Transfer start-waiting Command Queue	• MFP Control Board/Electronic sorting Board	C
CF754	File Memory Compression requesting Command Queue	• MFP Control Board/Electronic sorting Board	C
CF764	Panel instruction delete job Queue	• MFP Control Board	C
CF774	Warning delete job Queue	• MFP Control Board	C
CF784	Application instruction delete job Queue	• MFP Control Board	C
CF794	Output page information for Duplex back side Queue	• MFP Control Board	C
CF7A4	Paper feed completion output page information Queue	• MFP Control Board	C
CF7B4	Exposure compaction output page information Queue	• MFP Control Board	C
CF7C4	Pre-discharge completion output page information Queue	• MFP Control Board	C
CF7D4	Touch panel coordinate data Queue	• MFP Control Board	C
CF7E4	Direct Key data Queue	• MFP Control Board	C
CF802	SIO Sending Port...ENG	• MFP Control Board/Engine	C
CF806	SIO Sending Port...IRC	• MFP Control Board/Copier Board	C
CF812	SIO Sending Port...Fiery	• MFP Control Board/External Control Interface Board	C
CF815	SIO Sending Port...PIC/PIC Terminal	• MFP Control Board	C
CF8ED	SIO Sending Port...EPNet	• MFP Control Board	C
CF902	SIO Receiving Port...ENG	• MFP Control Board/Engine	C
CF906	SIO Receiving Port...IRC	• MFP Control Board/Copier Board	C
CF912	SIO Receiving Port...Fiery	• MFP Control Board/External Control Interface Board	C
CF915	SIO Receiving Port...PIC/PIC Terminal	• MFP Control Board	C

Code	Item	Relevant Electrical Components, Units, and Options	Rank
CF9ED	SIO Receiving Port...EPNet	• MFP Control Board	C
CFA01	getOneImgTransInfoFromTh() No applied thread	• MFP Control Board/Electronic sorting Board	C
CFA02	chkEnableAllocExec() default error	• MFP Control Board/Electronic sorting Board	C
CFA03	setTransBandAndRepeatNum() error	• MFP Control Board/Electronic sorting Board	C
CFA04	Application ID error	• MFP Control Board/Electronic sorting Board	C
CFA05	Thread selection image process- ing mode error	• MFP Control Board/Electronic sorting Board	C
CFA06	getOneImgIndexNumFromTh() No applied thread	• MFP Control Board/Electronic sorting Board	C
CFA07	setBufBandFromOut() No applied thread	• MFP Control Board/Electronic sorting Board	C
CFA08	chkStartOutput() No applied thread	• MFP Control Board/Electronic sorting Board	C
CFA09	rptReleaseMemResultACS() No applied thread	• MFP Control Board/Electronic sorting Board	C
CFA10	rptEndBandTrans() No applied thread	• MFP Control Board/Electronic sorting Board	C
CFA11	cancelTransExec() No applied thread	• MFP Control Board/Electronic sorting Board	C
CFA12	CC_ImgTransInfo:allocTransIn- dex	• MFP Control Board/Electronic sorting Board	C
CFA13	CC_MultiThreadProfile:rptBuf2 MemClrEnd	• MFP Control Board/Electronic sorting Board	C
CFA21	Outside image input start	• MFP Control Board/Electronic sorting Board	C
CFA22	Inside image outside output start	• MFP Control Board/Electronic sorting Board	C
CFA23	Engine Input start	• MFP Control Board/Electronic sorting Board	C
CFA24	Buffer memory -> File memory transfer Start	• MFP Control Board/Electronic sorting Board	C
CFA25	BTC compression/CMM start	• MFP Control Board/Electronic sorting Board	C
CFA26	Inside image PCIBridgeDMA input/output start	• MFP Control Board/Electronic sorting Board	C
CFA27	File memory -> Buffer memory transfer Start	• MFP Control Board/Electronic sorting Board	C
CFA28	BTC extension start	• MFP Control Board/Electronic sorting Board	C
CFA29	JPEG compression start	• MFP Control Board/Electronic sorting Board	C
CFA30	JPEG extension start	• MFP Control Board/Electronic sorting Board	C
CFA31	Software resolution conversion start	• MFP Control Board/Electronic sorting Board	C
CFA32	Hardware resolution conversion start	• MFP Control Board/Electronic sorting Board	C
CFA33	Software rotating processing start	• MFP Control Board/Electronic sorting Board	C
CFA34	Other Sequence malfunction	• MFP Control Board/Electronic sorting Board	C
CFA35	Buffer Array malfunction	• MFP Control Board/Electronic sorting Board	C

Code	Item	Relevant Electrical Components, Units, and Options	Rank
CFA36	Thread Service malfunction	• MFP Control Board/Electronic sorting Board	C
CFA37	Input image height 0	• MFP Control Board/Electronic sorting Board	C
CFA38	Output image width 0	• MFP Control Board/Electronic sorting Board	C
CFA41	pcbuf_exinput.cpp,h	• MFP Control Board/Electronic sorting Board	C
CFA42	pcbuf_inout.cpp,h	• MFP Control Board/Electronic sorting Board	C
CFA43	pcbuf_exoutput.cpp,h	• MFP Control Board/Electronic sorting Board	C
CFA61	DMA A	• MFP Control Board/Electronic sorting Board	C
CFA62	DMA B	• MFP Control Board/Electronic sorting Board	C
CFA63	DMA C	• MFP Control Board/Electronic sorting Board	C
CFA64	DMA D	• MFP Control Board/Electronic sorting Board	C
CFA65	DMA E	• MFP Control Board/Electronic sorting Board	C
CFA66	DMA F	• MFP Control Board/Electronic sorting Board	C
CFA67	DMA G	• MFP Control Board/Electronic sorting Board	C
CFA68	DMA H	• MFP Control Board/Electronic sorting Board	C
CFA69	DMA I	• MFP Control Board/Electronic sorting Board	C
CFA70	DMA J	• MFP Control Board/Electronic sorting Board	C
CFA71	Interruption	• MFP Control Board/Electronic sorting Board	C
CFA72	Common register setting	• MFP Control Board/Electronic sorting Board	C
CFA73	PCIBridgeDMA	• MFP Control Board/Electronic sorting Board	C
CFA74	BTC compression/Extension device	• MFP Control Board/Electronic sorting Board	C
CFA75	CMM	• MFP Control Board/Electronic sorting Board	C
CFB52	DMA_A error interruption	• MFP Control Board/Copier Board	C
CFB53	DMA_B error interruption	• MFP Control Board/Copier Board	C
CFB54	DMA_C error interruption	• MFP Control Board/Electronic sorting Board	C
CFB55	DMA_D 0 error interruption	• MFP Control Board/Engine	C
CFB56	DMA_D 1 error interruption	• MFP Control Board/Engine	C
CFB57	DMA_D 2 error interruption	• MFP Control Board/Engine	C
CFB58	DMA_D 3 error interruption	• MFP Control Board/Engine	C
CFB59	DMA_E error interruption	• MFP Control Board	C
CFB5A	DMA_F error interruption	• MFP Control Board/Electronic sorting Board	C
CFB5B	DMA_G error interruption	• MFP Control Board/External Control Interface Board	C
CFB5C	DMA_H error interruption	• MFP Control Board/Electronic sorting Board	C
CFB5D	DMA_I error interruption	• MFP Control Board	C
CFB5E	DMA_J error interruption	• MFP Control Board/Engine	C
CFB5F	Watch Dog Timer Error interruption	• MFP Control Board	C
CFB60	PCI slave error interruption	• MFP Control Board/FAX Board/Local I/F Board/ Electronic sorting Board/Copier Board	C
CFB61	Local bus error interruption	• MFP Control Board	C
CFB6E	Underrun at DMA_D 0 image output interface 1	• MFP Control Board/Electronic sorting Board	C

Code	Item	Relevant Electrical Components, Units, and Options	Rank
CFB6F	Underrun at DMA_D 1 image output interface 1	• MFP Control Board/Electronic sorting Board	C
CFB70	Underrun at DMA_D 2 image output interface 1	• MFP Control Board/Electronic sorting Board	C
CFB71	Underrun at DMA_D 3 image output interface 1	• MFP Control Board/Electronic sorting Board	C
CFB72	Underrun at DMA_G image output interface 1	• MFP Control Board/Electronic sorting Board	C
CFB73	Overflow at DMA_A/B image output interface 1	• MFP Control Board/Copier Board	C
CFB74	Underrun at DMA_F ASIC 1 image output interface	• MFP Control Board/Electronic sorting Board	C
CFB75	Overflow at DMA_C ASIC 1 image input interface	• MFP Control Board/Electronic sorting Board	C
CFB76	Target abort	• MFP Control Board	C
CFB77	Master abort	• MFP Control Board	C
CFB78	Forced stoppage	• MFP Control Board	C
CFB79	Retry error detection of PCI master	• MFP Control Board	C
CFB7A	Master read data parity error	• MFP Control Board	C
CFB7B	Master write data parity error	• MFP Control Board	C
CFB7C	System error	• MFP Control Board	C
CFB7D	Slave read data parity error	• MFP Control Board	C
CFB7E	Slave write data parity error	• MFP Control Board	C
CFB7F	Address parity error	• MFP Control Board	C
CFC01	Color Number faulty	• MFP Control Board	C
CFC02	Thread Sequence malfunction	• MFP Control Board	C
CFC03	Thread Service Sequence malfunction	• MFP Control Board	C
CFC04	Thread Message Q malfunction	• MFP Control Board	C
CFC12	Output of output buffer 2 surpasses clear.	• MFP Control Board	C
CFC13	Image transfer control information acquisition malfunction	• MFP Control Board	C
CFD00	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_A0	• MFP Control Board/Copier Board	C
CFD01	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_A1	• MFP Control Board/Copier Board	C
CFD02	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_A2	• MFP Control Board/Copier Board	C
CFD03	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_B0	• MFP Control Board/Copier Board	C

Code	Item	Relevant Electrical Components, Units, and Options	Rank
CFD04	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_B1	• MFP Control Board/Copier Board	C
CFD05	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_B2	• MFP Control Board/Copier Board	C
CFD06	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_C	• MFP Control Board/Electronic sorting Board	C
CFD07	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_D	• MFP Control Board/Electronic sorting Board	C
CFD08	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_E	• MFP Control Board	C
CFD09	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_F	• MFP Control Board/Electronic sorting Board	C
CFD0A	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_G	• MFP Control Board/External Control Interface Board	C
CFD0B	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_H0	• MFP Control Board/Electronic sorting Board	C
CFD0C	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_H1	• MFP Control Board/Electronic sorting Board	C
CFD0D	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_H2	• MFP Control Board/Electronic sorting Board	C
CFD0E	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA-I	• MFP Control Board	C
CFD0F	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA-J	• MFP Control Board/Engine	C
CFD10	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA PCI Bridge	• MFP Control Board	C
CFD11	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA 19 ASIC1	• MFP Control Board/Electronic sorting Board	C
CFD12	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA JPEG	• MFP Control Board	C
CFD13	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA NO	• MFP Control Board	C

Code	Item	Relevant Electrical Components, Units, and Options	Rank
CFE00	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_A0	• MFP Control Board/Copier Board	C
CFE01	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_A1	• MFP Control Board/Copier Board	C
CFE02	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_A2	• MFP Control Board/Copier Board	C
CFE03	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_B0	• MFP Control Board/Copier Board	C
CFE04	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_B1	• MFP Control Board/Copier Board	C
CFE05	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_B2	• MFP Control Board/Copier Board	C
CFE06	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_C	• MFP Control Board/Electronic sorting Board	C
CFE07	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_D	• MFP Control Board/Electronic sorting Board	C
CFE08	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_E	• MFP Control Board	C
CFE09	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_F	• MFP Control Board/Electronic sorting Board	C
CFE0A	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_G	• MFP Control Board/External Control Interface Board	C
CFE0B	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_H0	• MFP Control Board/Electronic sorting Board	C
CFE0C	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_H1	• MFP Control Board/Electronic sorting Board	C
CFE0D	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA_H2	• MFP Control Board/Electronic sorting Board	C
CFE0E	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA-I	• MFP Control Board	C
CFE0F	ASIC10 Timeout Number of DMA under operation and transfer completion line=0: DMA-J	• MFP Control Board/Engine	C

Code	Item	Relevant Electrical Components, Units, and Options	Rank
CFE10	ASIC10 Timeout Number of DMA under operation and transfer completion line≠0: DMAPCI Bridge	• MFP Control Board	C
CFE11	ASIC10 Timeout Number of DMA under operation and transfer completion line≠0: DMA19 ASIC1	• MFP Control Board/Electronic sorting Board	C
CFE12	ASIC10 Timeout Number of DMA under operation and transfer completion line≠0: DMA JPEG	• MFP Control Board	C
CFE13	ASIC10 Timeout Number of DMA under operation and transfer completion line≠0: DMA NO	• MFP Control Board	C
CFF00	ASIC10 Timeout Waiting state of DMA band preparation register setting:DMA_A0	• MFP Control Board/Copier Board	C
CFF01	ASIC10 Timeout Waiting state of DMA band preparation register setting:DMA_A1	• MFP Control Board/Copier Board	C
CFF02	ASIC10 Timeout Waiting state of DMA band preparation register setting:DMA_A2	• MFP Control Board/Copier Board	C
CFF03	ASIC10 Timeout Waiting state of DMA band preparation register setting:DMA_B0	• MFP Control Board/Copier Board	C
CFF04	ASIC10 Timeout Waiting state of DMA band preparation register setting:DMA_B1	• MFP Control Board/Copier Board	C
CFF05	ASIC10 Timeout Waiting state of DMA band preparation register setting:DMA_B2	• MFP Control Board/Copier Board	C
CFF06	ASIC10 Timeout Waiting state of DMA band preparation register setting:DMA_C	• MFP Control Board/Electronic sorting Board	C
CFF07	ASIC10 Timeout Waiting state of DMA band preparation register setting:DMA_D	• MFP Control Board/Electronic sorting Board	C
CFF08	ASIC10 Timeout Waiting state of DMA band preparation register setting:DMA_E	• MFP Control Board	C
CFF09	ASIC10 Timeout Waiting state of DMA band preparation register setting:DMA_F	• MFP Control Board/Electronic sorting Board	C
CFF0A	ASIC10 Timeout Waiting state of DMA band preparation register setting:DMA_G	• MFP Control Board/External Control Interface Board	C
CFF0B	ASIC10 Timeout Waiting state of DMA band preparation register setting:DMA_H0	• MFP Control Board/Electronic sorting Board	C

Code	Item	Relevant Electrical Components, Units, and Options	Rank
CFF0C	ASIC10 Timeout Waiting state of DMA band preparation register setting:DMA_H1	• MFP Control Board/Electronic sorting Board	C
CFF0D	ASIC10 Timeout Waiting state of DMA band preparation register setting:DMA_H2	• MFP Control Board/Electronic sorting Board	C
CFF0E	ASIC10 Timeout Waiting state of DMA band preparation register setting:DMA-I	• MFP Control Board	C
CFF0F	ASIC10 Timeout Waiting state of DMA band preparation register setting:DMA-J	• MFP Control Board/Engine	C
CFF10	ASIC10 Timeout Waiting state of DMA band preparation register setting:DMA PCI Bridge	• MFP Control Board	C
CFF11	ASIC10 Timeout Waiting state of DMA band preparation register setting:DMA 19 ASIC1	• MFP Control Board/Electronic sorting Board	C
CFF12	ASIC10 Timeout Waiting state of DMA band preparation register setting:DMA JPEG	• MFP Control Board	C
CFF13	ASIC10 Timeout Waiting state of DMA band preparation register setting:DMA NO	• MFP Control Board	C

16.5 How to reset

- Different malfunction resetting procedures apply depending on the rank of the trouble code.

* List of Malfunction Resetting Procedures

Trouble Code Rank	Resetting Procedures
Rank A	• Trouble Reset For details of Trouble Reset, see Adjustment/Setting.
Rank B	• Opening/Closing the front door
Rank C	• Turning main power switch OFF/ON

16.6 Solution

16.6.1 C0204: Tray 2 Elevator failure

Relevant Electrical Parts			
Tray 2 Lift-Up Sensor (PC105) Tray 2 Lift-Up Motor (M101)		Tray 2 Board (PWB-Z)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the M101 connector for proper connection and correct as necessary.	—	—
2	Check the connector of M101 for proper drive coupling and correct as necessary.	—	—
3	PC115 I/O check	PWB-Z PJ6Z-3 (ON)	T to U-26
4	M101 operation check	PWB-Z PJ4Z-4 to 5	M-24
5	Change PWB-Z.	—	—

16.6.2 C0211: Manual Bypass Paper Lifting Failure

Relevant Electrical Parts			
Bypass Lift-Up Sensor (PC115) Tray 2 Vertical Transport Motor (M103)		Tray 2 Board (PWB-Z)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the M103 connector for proper connection and correct as necessary.	—	—
2	Check the connector of M103 for proper drive coupling and correct as necessary.	—	—
3	PC115 I/O check	PWB-Z PJ7Z<A>-11 (ON)	T to U-25
4	M103 operation check	PWB-Z PJ5Z-5 to 8	T to U-22
5	Change PWB-Z.	—	—

16.6.3 C0301: Suction Fan Motor's failure to turn

Relevant Electrical Parts			
Suction Fan Motor (M12)		Control Board (PWB-MC)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the connector of motor for proper connection and correct as necessary.	—	—
2	Check the fan for possible overload and correct as necessary.	—	—
3	M12 operation check	PWB-MC PJ13MC-7 (REM) PWB-MC PJ13MC-9 (LOCK)	C to D-2
4	Change PWB-MC	—	—

16.6.4 C0351: Paper Cooling Fan Motor's failure to turn

Relevant Electrical Parts			
Paper Cooling Fan Motor (M26)		Control Board (PWB-MC)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the connector of motor for proper connection and correct as necessary.	—	—
2	Check the fan for possible overload and correct as necessary.	—	—
3	M26 operation check	PWB-MC PJ7MC-8 (REM) PWB-MC PJ7MC-10 (LOCK)	K-8
4	Change PWB-MC	—	—

16.6.5 C2151: 2nd Image Transfer Roller pressure/retraction failure

Relevant Electrical Parts			
2nd Image Transfer Pressure/Retraction Sensor (PC29) 2nd Image Transfer Pressure/Retraction Motor (M13)		Control Board (PWB-MC)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the M13 connector for proper connection and correct as necessary.	—	—
2	PC29 I/O check	PWB-MC PJ24MC-9 (ON)	C to D-3
3	M13 operation check	PWB-MC PJ13MC-1 (REM)	C to D-2
4	Change PWB-MC	—	—

16.6.6 C2152: Image Transfer Belt pressure/retraction failure

Relevant Electrical Parts			
1st Image Transfer Retraction Position Sensor (PC12)		Control Board (PWB-MC)	
1st Image Transfer Pressure/Retraction Motor (M11)			
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the M11 connector for proper connection and correct as necessary.	—	—
2	PC12 I/O check	PWB-MC PJ20MC-6 (ON)	C to D-22
3	M11 operation check	PWB-MC PJ7MC-1 to 4	K-7
4	Change PWB-MC	—	—

16.6.7 C2160: Cyan PC Drum Charge Corona malfunction

16.6.8 C2161: Magenta PC Drum Charge Corona malfunction

16.6.9 C2162: Yellow PC Drum Charge Corona malfunction

16.6.10 C2163: Black PC Drum Charge Corona malfunction

16.6.11 C2164: PC Drum Charge Corona malfunction

Relevant Electrical Parts			
Imaging Unit /C Imaging Unit /M Imaging Unit /Y Imaging Unit /K		High Voltage Unit/1 (HV1) Control Board (PWB-MC)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the Imaging Unit contact and correct or clean as necessary.	—	—
2	Check the HV1 contact and correct or clean as necessary.	—	—
3	Change Imaging Unit.	—	—
4	Change HV1.	—	—
5	Change PWB-MC	—	—

16.6.12 C2251: K PC Motor failure to turn

Relevant Electrical Parts			
K PC Motor (M7)		Control Board (PWB-MC)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the connector of motor for proper connection and correct as necessary.	—	—
2	Check the connector of motor for proper drive coupling and correct as necessary.	—	—
3	Check the PWB-MC connector for proper connection and correct as necessary.	PWB-MC PJ2MC-3 (DC24 V)	H-2
4	M7 operation check	PWB-MC PJ33MC-3 (REM) PWB-MC PJ33MC-6 (LOCK)	C to D-18
5	Change PWB-MC.	—	—

16.6.13 C2252: K PC Motor turning at abnormal timing

Relevant Electrical Parts			
K PC Motor (M7)		Control Board (PWB-MC)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	M7 operation check	PWB-MC PJ33MC-3 (REM) PWB-MC PJ33MC-6 (LOCK)	C to D-18
2	Change PWB-MC.	—	—

16.6.14 C2253: Color PC Motor failure to turn

Relevant Electrical Parts			
Color PC Drum Motor (M5)		Control Board (PWB-MC)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the connector of motor for proper connection and correct as necessary.	—	—
2	Check the connector of motor for proper drive coupling and correct as necessary.	—	—
3	Check the PWB-MC connector for proper connection and correct as necessary.	PWB-MC PJ2MC-7 (DC24 V)	H-2
4	M5 operation check (C0018)	PWB-MC PJ33MC-10 (REM) PWB-MC PJ33MC-13 (LOCK)	C to D-18 to 19
5	Change PWB-MC	—	—

16.6.15 C2254: Color PC Motor turning at abnormal timing

Relevant Electrical Parts			
Color PC Drum Motor (M5)		Control Board (PWB-MC)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	M5 operation check	PWB-MC PJ33MC-10 (REM) PWB-MC PJ33MC-13 (LOCK)	C to D- 18 to 19
2	Change PWB-MC	—	—

16.6.16 C2255: Color Developing Motor failure to turn

Relevant Electrical Parts			
Color Developing Motor (M6)		DC Power Supply (PU1)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the connector of motor for proper connection and correct as necessary.	—	—
2	Check the connector of motor for proper drive coupling and correct as necessary.	—	—
3	Check the PU-1 connector for proper connection and correct as necessary.	PU1 PJ5PU1-11 (DC24 V)	P-5
4	M6 operation check	PWB-MC PJ3MC-3 (REM) PWB-MC PJ3MC-6 (LOCK)	K-15
5	Change PU-1	—	—

16.6.17 C2256: Color Developing Motor turning at abnormal timing

Relevant Electrical Parts			
Color Developing Motor (M6)		DC Power Supply (PU1)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	M6 operation check	PWB-MC PJ3MC-3 (REM) PWB-MC PJ3MC-6 (LOCK)	K-15
2	Change PWB-MC	—	—

16.6.18 C2257: Cleaning Brush Motor's failure to turn

Relevant Electrical Parts			
Cleaning Brush Motor (M22)		Control Board (PWB-MC)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the M22 connector for proper connection and correct as necessary.	—	—
2	Check M22 for proper drive coupling and correct as necessary.	—	—
3	Check the PWB-MC connector for proper connection and correct as necessary.	PWB-MC PJ2MC-9 (DC24 V)	H-2
4	M22 operation check	PWB-MC PJ37MC-3 (REM) PWB-MC PJ37MC-6 (LOCK)	K-3
5	Change PWB-MC.	—	—

16.6.19 C2258: Cleaning Brush Motor Turning at abnormal timing

Relevant Electrical Parts			
Cleaning Brush Motor (M22)		Control Board (PWB-MC)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	M22 operation check	PWB-MC PJ37MC-3 (REM) PWB-MC PJ37MC-6 (LOCK)	K-3
2	Change PWB-MC.	—	—

16.6.20 C2351: Toner Suction Fan Motor/K's failure to turn

Relevant Electrical Parts			
Toner Suction Fan Motor/K (M23)		Control Board (PWB-MC)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the M23 connector for proper connection and correct as necessary.	—	—
2	Check M23 for proper drive coupling and correct as necessary.	—	—
3	M23 operation check	PWB-MC PJ15MC-10 (REM) PWB-MC PJ15MC-12 (LOCK)	C to D-21
4	Change PWB-MC.	—	—

16.6.21 C2352: Toner Suction Fan Motor's failure to turn

Relevant Electrical Parts			
Toner Suction Fan Motor (M20)		Control Board (PWB-MC)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the M20 connector for proper connection and correct as necessary.	—	—
2	Check M20 for proper drive coupling and correct as necessary.	—	—
3	M20 operation check	PWB-MC PJ15MC-1 (REM) PWB-MC PJ15MC-3 (LOCK)	C to D-20 to 21
4	Change PWB-MC.	—	—

16.6.22 C2451: New Transfer Cleaner Unit resetting failure

16.6.23 C3461: New Fusing Unit resetting failure

Relevant Electrical Parts			
Control Board (PWB-MC)			
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Reinstall Unit	—	—
2	Change PWB-MC	—	—

- 16.6.24 **C2551: Abnormally low toner density detected Cyan TCR Sensor**
- 16.6.25 **C2553: Abnormally low toner density detected Magenta TCR Sensor**
- 16.6.26 **C2555: Abnormally low toner density detected Yellow TCR Sensor**

Relevant Electrical Parts	
TCR Sensor/C (PWB-N3)	Control Board (PWB-MC)
TCR Sensor/M (PWB-N2)	MFP Control Board (PWB-MFPC)
TCR Sensor/Y (PWB-N1)	Imaging Unit /C
Toner Supply Motor C/K (M3)	Imaging Unit /M
Toner Supply Motor Y/M (M4)	Imaging Unit /Y

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Perform image troubleshooting procedure if image density is low.	—	—
2	Clean the TCR Sensor window on the under-side of the Imaging Unit if dirty	—	—
3	Correct the TCR Sensor spring moving part if faulty.	—	—
4	Clean the TCR Sensor LED if dirty	—	—
5	Change TCR Sensor C/M/Y.	—	—
6	M3, M4 operation check	PWB-MC PJ8MC-1 to 4 PWB-MC PJ8MC-5 to 8	C~D-14
7	Change Imaging Unit.	—	—
8	Change PWB-MC	—	—
9	Change PWB-MFPC.	—	—

- 16.6.27 C2552: Abnormally high toner density detected Cyan TCR Sensor
- 16.6.28 C2554: Abnormally high toner density detected Magenta TCR Sensor
- 16.6.29 C2556: Abnormally high toner density detected Yellow TCR Sensor

Relevant Electrical Parts	
TCR Sensor/C (PWB-N3) TCR Sensor/M (PWB-N2) TCR Sensor/Y (PWB-N1)	Control Board (PWB-MC) MFP Control Board (PWB-MFPC) Imaging Unit /C Imaging Unit /M Imaging Unit /Y

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Clean the TCR Sensor window on the underside of the Imaging Unit if dirty	—	—
2	Clean the TCR Sensor LED if dirty	—	—
3	Correct the contact and/or WIRING of the TCR Sensor if faulty.	—	—
4	Change TCR Sensor C/M/Y.	—	—
5	Change Imaging Unit.	—	—
6	Change PWB-MC	—	—
7	Change PWB-MFPC.	—	—

16.6.30 C2557: Abnormally low toner density detected Black TCR Sensor

Relevant Electrical Parts	
TCR Sensor/K (UN10) Toner Supply Motor C/K (M3)	Control Board (PWB-MC) MFP Control Board (PWB-MFPC)

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Perform image troubleshooting procedure if image density is low.	—	—
2	M3 operation check	PWB-MC PJ8MC-1 to 4	C to D-14
3	Change Imaging Unit.	—	—
4	Change PWB-MC	—	—
5	Change PWB-MFPC.	—	—

16.6.31 C2558: Abnormally high toner density detected Black TCR Sensor

Relevant Electrical Parts			
Imaging Unit /K TCR Sensor/K (PWB-N4)		Control Board (PWB-MC) MFP Control Board (PWB-MFPC)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Correct the TCR connection on the underside of the Imaging Unit if faulty.	—	—
2	Clean or correct each contact of the Imaging Unit if faulty.	—	—
3	Change Imaging Unit.	—	—
4	Change PWB-MC	—	—
5	Change PWB-MFPC.	—	—

16.6.32 C2559: Cyan TCR Sensor adjustment failure

16.6.33 C255A: Magenta TCR Sensor adjustment failure

16.6.34 C255B: Yellow TCR Sensor adjustment failure

Relevant Electrical Parts			
TCR Sensor/C (PWB-N3) TCR Sensor/M (PWB-N2) TCR Sensor/Y (PWB-N1) Toner Supply Motor C/K (M3) Toner Supply Motor Y/M (M4)		Control Board (PWB-MC) MFP Control Board (PWB-MFPC) Imaging Unit /C Imaging Unit /M Imaging Unit /Y	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Clean the TCR Sensor window on the underside of the Imaging Unit if dirty	—	—
2	Clean the TCR Sensor LED if dirty	—	—
3	Correct the contact and/or WIRING of the TCR Sensor if faulty.	—	—
4	Reinstall Imaging Unit C/M/Y.	—	—
5	M3, M4 operation check	PWB-MC PJ8MC-1 to 4 PWB-MC PJ8MC-5 to 8	C to D-14
6	Change Imaging Unit.	—	—
7	Change PWB-MC	—	—
8	Change PWB-MFPC.	—	—

16.6.35 C255C: Black TCR Sensor adjustment failure

Relevant Electrical Parts			
Imaging Unit /K		Control Board (PWB-MC) MFP Control Board (PWB-MFPC)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Correct the TCR connection on the underside of the Imaging Unit if faulty.	—	—
2	Clean or correct each contact of the Imaging Unit if faulty.	—	—
3	Change Imaging Unit.	—	—
4	Change PWB-MC	—	—
5	Change PWB-MFPC.	—	—

16.6.36 C2651: Cyan Imaging Unit EEPROM access error

16.6.37 C2652: Magenta Imaging Unit EEPROM access error

16.6.38 C2653: Yellow Imaging Unit EEPROM access error

16.6.39 C2654: Black Imaging Unit EEPROM access error

Relevant Electrical Parts			
Imaging Unit /C Imaging Unit /M Imaging Unit /Y Imaging Unit /K		Control Board (PWB-MC)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Clean the connection between the Imaging Unit and the machine if dirty	—	—
2	Reinstall Imaging Unit C/M/Y/K.	—	—
3	Change Imaging Unit.	—	—
4	Change PWB-MC	—	—

- 16.6.40 C2655: Cyan LPH correction data download failure**
- 16.6.41 C2656: Yellow LPH correction data download failure**
- 16.6.42 C2657: Magenta LPH correction data download failure**
- 16.6.43 C2658: Black LPH correction data download failure**

Relevant Electrical Parts	
LPH Assy/C LPH Assy/M LPH Assy/Y LPH Assy/K	LED Drive Board (PWB-LED) MFP Control Board (PWB-MFPC) Control Board (PWB-MC)

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Correct the harness connection between LPH and PWB-LED if faulty.	—	—
2	Correct the harness connection between PWB-LED and PWB-MFPC if faulty.	—	—
3	Change LPH Assy.	—	—
4	Change PWB-LED.	—	—
5	Change PWB-MFPC.	—	—
6	Change PWB-MC	—	—

16.6.44 C3101: Fusing Pressure Roller pressure/retraction failure

Relevant Electrical Parts	
Fusing Pressure/Retraction Sensor (PC33) Fusing Pressure Roller Pressure/Retraction Motor (M19)	Control Board (PWB-MC) Fusing Unit

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the M9 connector for proper connection and correct as necessary.	—	—
2	PC33 I/O check	PWB-MC PJ26MC-12 (ON)	—
3	PC33 operation check	—	—
4	M19 operation check	PWB-MC PJ14MC-5 to 6	C to D-6
5	Change Fusing Unit	—	—
6	Change PWB-MC	—	—

16.6.45 C3201: Fusing Drive Motor's failure to turn

Relevant Electrical Parts			
Fusing Drive Motor (M2)		Control Board (PWB-MC)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the M2 connector for proper connection and correct as necessary.	—	—
2	Check the Fusing Unit drive for possible overload and correct as necessary.	—	—
3	Check the PWB-MC connector for proper connection and correct as necessary.	PWB-MC PJ2MC-5 (DC24 V)	H-2
4	M2 operation check	PWB-MC PJ31MC-10 (REM) PWB-MC PJ31MC-13 (LOCK)	C to D-17
5	Change PWB-MC	—	—

16.6.46 C3202: Fusing Drive Motor turning at abnormal timing

Relevant Electrical Parts			
Fusing Drive Motor (M2)		Control Board (PWB-MC)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	M2 operation check	PWB-MC PJ31MC-10 (REM) PWB-MC PJ31MC-13 (LOCK)	C to D-17
2	Change PWB-MC	—	—

16.6.47 C3301: Fusing Cooling Fan Motor /1's failure to turn

Relevant Electrical Parts			
Fusing Cooling Fan Motor/1 (M9)		DC Power Supply (PU1)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the connector of motor for proper connection and correct as necessary.	—	—
2	Check the fan for possible overload and correct as necessary.	—	—
3	M9 operation check	PWB-MC PJ6MC-4 (REM) PWB-MC PJ6MC-6 (LOCK)	K-9
4	Change PU-1	—	—

16.6.48 C3302: Fusing Cooling Fan Motor /2, /3's failure to turn

Relevant Electrical Parts			
Fusing Cooling Fan Motor/2 (M15) Fusing Cooling Fan Motor/3 (M16)		Control Board (PWB-MC)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the connector of motor for proper connection and correct as necessary.	—	—
2	Check the fan for possible overload and correct as necessary.	—	—
3	M15, M16 operation check	PWB-MC PJ15MC-4 (REM) PWB-MC PJ15MC-6 (LOCK) PWB-MC PJ15MC-7 (REM) PWB-MC PJ15MC-9 (LOCK)	C to D-21
4	Change PWB-MC	—	—

- 16.6.49 C3451: Heating Roller warm-up failure
- 16.6.50 C3452: Fusing Pressure Roller warm-up failure
- 16.6.51 C3751: Heating Roller abnormally high temperature
- 16.6.52 C3752: Fusing Pressure Roller abnormally high temperature
- 16.6.53 C3851: Heating Roller abnormally low temperature
- 16.6.54 C3852: Fusing Pressure Roller abnormally low temperature

Relevant Electrical Parts			
Fusing Unit		DC Power Supply (PU1) Control Board (PWB-MC)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the Fusing Unit for correct installation (whether it is secured in position).	—	—
2	Check the Fusing Unit, PWB-MC and PU1 for proper connection and correct or change as necessary.	—	—
3	Change Fusing Unit.	—	—
4	Change PWB-MC	—	—
5	Change PU1.	—	—

16.6.55 C4705: Printer Time Out

Relevant Electrical Parts			
MFP Control Board (PWB-MFPC)			
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Select "Service Mode" → "State Confirmation" → "Memory/HDD Adj." → "Memory Bus Check" → "Memory→PRT."	—	—
2	Check the connectors on PWB-MFPC for proper connection and correct as necessary.	—	—
3	Change PWB-MFPC.	—	—

16.6.56 C4761: Compression hardware timeout

16.6.57 C4765: Extraction hardware timeout

16.6.58 C4770: JBIG0 Error

16.6.59 C4771: JBIG1 Error

16.6.60 C4772: JBIG2 Error

16.6.61 C4773: JBIG3 Error

16.6.62 C4780: Compressor 0 command buffer stop failure

16.6.63 C4781: Compressor 1 command buffer stop failure

16.6.64 C4782: Compressor 2 command buffer stop failure

16.6.65 C4783: Compressor 3 command buffer stop failure

16.6.66 CD211: PCI-SDRAM DMA operation failure

16.6.67 CD212: Compression/extraction timeout detection

Relevant Electrical Parts			
MFP Control Board (PWB-MFPC)			
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Change PWB-MFPC.	—	—

16.6.68 C5102: Main Motor's failure to turn

Relevant Electrical Parts			
Main Motor (M1)		Control Board (PWB-MC) DC Power Supply (PU1)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the M1 connector for proper connection and correct as necessary.	—	—
2	Check M1 for proper drive coupling and correct as necessary.	—	—
3	Check the PWB-MC connector for proper connection and correct as necessary.	PWB-MC PJ2MC-1 (DC24 V)	H-2
4	M1 operation check	PWB-MC PJ31MC-3 (REM) PWB-MC PJ31MC-6 (LOCK)	C to D-17
5	Change PWB-MC.	—	—
6	Change PU1.	—	—

16.6.69 C5103: Main Motor Turning at abnormal timing

Relevant Electrical Parts			
Main Motor (M1)		Control Board (PWB-MC) DC Power Supply (PU1)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	M1 operation check	PWB-MC PJ31MC-3 (REM) PWB-MC PJ31MC-6 (LOCK)	C to D-17
2	Change PWB-MC.	—	—
3	Change PU1.	—	—

16.6.70 C5351: Power Supply Cooling Fan Motor's failure to turn

Relevant Electrical Parts			
Power Supply Cooling Fan Motor (M21)		DC Power Supply (PU1)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the connector of motor for proper connection and correct as necessary.	—	—
2	Check the fan for possible overload and correct as necessary.	—	—
3	M21 operation check	PU1 PJ10PU1-3 (LOCK)	M to N-1 to 2
4	Change PU-1	—	—

16.6.71 C5353: Cooling Fan Motor 2's failure to turn

Relevant Electrical Parts			
Cooling Fan Motor/2 (M10)		Control Board (PWB-MC)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the connector of motor for proper connection and correct as necessary.	—	—
2	Check the fan for possible overload and correct as necessary.	—	—
3	M10 operation check	PWB-MC PJ7MC-6 (REM) PWB-MC PJ7MC-7 (LOCK)	K-8
4	Change PWB-MC	—	—

16.6.72 C5354: Ozone Ventilation Fan Motor's failure to turn

Relevant Electrical Parts			
Ozone Ventilation Fan Motor (M18)		Control Board (PWB-MC)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the connector of motor for proper connection and correct as necessary.	—	—
2	Check the fan for possible overload and correct as necessary.	—	—
3	M18 operation check	PWB-MC PJ6MC-1 (REM) PWB-MC PJ6MC-3 (LOCK)	K-8 to 9
4	Change PWB-MC	—	—

16.6.73 C5355: Cooling Fan Motor/3's failure to turn

Relevant Electrical Parts			
Cooling Fan Motor/3 (M25)		Control Board (PWB-MC)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the connector of motor for proper connection and correct as necessary.	—	—
2	Check the fan for possible overload and correct as necessary.	—	—
3	M25 operation check	PWB-MC PJ40MC-1 (REM) PWB-MC PJ40MC-3 (LOCK)	C to D-12
4	Change PWB-MC	—	—

16.6.74 C5356: Cooling Fan Motor/1's failure to turn

Relevant Electrical Parts			
Cooling Fan Motor/1 (M24)		Control Board (PWB-MC)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the connector of motor for proper connection and correct as necessary.	—	—
2	Check the fan for possible overload and correct as necessary.	—	—
3	M24 operation check	PWB-MC PJ40MC-4 (REM) PWB-MC PJ40MC-6 (LOCK)	C to D-12
4	Change PWB-MC	—	—

16.6.75 C5370: MFP Control Board Cooling Fan Motor's failure to turn

Relevant Electrical Parts			
MFP Control Board Cooling Fan Motor (M27)		Control Board (PWB-MC)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the connector of motor for proper connection and correct as necessary.	—	—
2	Check the fan for possible overload and correct as necessary.	—	—
3	M27 operation check	PWB-SIF PJ08SIF-3 (LOCK)	M-17
4	Change PWB-MC	—	—

16.6.76 C6102: Scanner Home Sensor malfunction

16.6.77 C6103: Scanner overrun failure

Relevant Electrical Parts	
Scanner Home Sensor (PC201) Scanner Motor (M201)	Scanner Motor Drive Board (PWB-IC) Image Processing Board (PWB-C)

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Correct or change the Scanner drive (cable, pulley, gear, belt) if it is faulty.	—	—
2	Correct the Scanner Motor set screw if loose.	—	—
3	Adjust “Image Position Leading Edge” and “Feed Direction Adjustment.”	—	—
4	Check the PC201, M201, PWB-IC and PWB-C connector for proper connection and correct as necessary.	—	—
5	PC201 I/O check	PWB-C PJ11C-8 (ON)	N-13
6	M201 operation check	PWB-IC PJ3IC-1 (REM) PWB-IC PJ3IC-3 (LOCK)	S-9
7	Change PWB-IC.	—	—
8	Change PWB-C.	—	—

16.6.78 C6301: Scanner Cooling Fan Motor's failure to turn

Relevant Electrical Parts	
Scanner Cooling Fan Motor (M202)	Control Board (PWB-MC)

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the connector of motor for proper connection and correct as necessary.	—	—
2	Check the fan for possible overload and correct as necessary.	—	—
3	M202 operation check	PWB-C PJ81C-2 (REM) PWB-C PJ81C-3 (LOCK)	N-10
4	Change PWB-MC	—	—

16.6.79 C6704: Scanner Time Out

Relevant Electrical Parts			
MFP Control Board (PWB-MFPC) Copier Board (PWB-CF)		Image Processing Board (PWB-C)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Select "Service Mode" → "State Confirmation" → "Memory/HDD Adj." → "Memory Bus Check" → "Scanner→Memory."	—	—
2	Check the connectors between PWB-C and PWB-CF for proper connection and correct as necessary.	—	—
3	Change PWB-MFPC.	—	—
4	Change PWB-C.	—	—

16.6.80 C6751: CCD clamp/gain adjustment failure

Relevant Electrical Parts			
Scanner Assy		CCD Sensor Board (PWB-A) Image Processing Board (PWB-C)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Correct the harness connection between PWB-A and PWB-C if faulty.	—	—
2	Check for possible extraneous light and correct as necessary.	—	—
3	Clean the lens, mirrors, CCD surface, and shad- ing sheet if dirty	—	—
4	Correct reflective mirror of the Scanner if faulty, or change Scanner.	—	—
5	Change PWB-A.	—	—
6	Change PWB-C.	—	—

16.6.81 C9401: Exposure Lamp's failure to turn ON

16.6.82 C9402: Exposure Lamp turning ON at abnormal timing

Relevant Electrical Parts	
Scanner Assy Flat Cable	Image Processing Board (PWB-C)

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the flat cable for proper connection and correct or change as necessary.	—	—
2	Change Scanner Assy.	—	—
3	Change PWB-C.	—	—

16.6.83 CA051: Standard Controller configuration failure

Relevant Electrical Parts	
MFP Control Board (PWB-MFPC)	

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check to see if the following setting has been correctly made: "Service Mode" → "System 2" → "Image Controller Setting." If the setting is changed, be sure to turn OFF and ON the Main Power Switch.	—	—
2	Check the connectors of the MFP Control Board (PWB-MFPC) for proper connection and correct as necessary.	—	—
3	Change PWB-MFPC.	—	—

16.6.84 CC001: Vendor connection failure

Relevant Electrical Parts	
Control Board (PWB-MC)	Coin Vendor (Japan) Coin Vendor Kit (North America, Europe)

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the Vendor connector for proper connection and correct as necessary.	—	—
2	Check the PWB-MC connector for proper connection and correct as necessary.	—	—
3	Change PWB-MC	—	—

16.6.85 CC151: ROM contents error upon startup (MSC)

16.6.86 CC152: ROM contents error upon startup (Scanner)

16.6.87 CC153: ROM contents error upon startup (PRT)

16.6.88 CC154: ROM contents error upon startup (LPH)

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the ROM version.	—	—
2	Rewrite firmware using the Compact Flash card.	—	—

16.6.89 CC163: ROM contents error (PRT)

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the ROM version.	—	—
2	Rewrite firmware using the Compact Flash card.	—	—

16.6.90 CD002: JOB RAM save error

Relevant Electrical Parts	
MFP Control Board (PWB-MFPC)	Hard Disk

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the Hard Disk connector for proper connection and correct as necessary.	—	—
2	Format Hard Disk.	—	—
3	Change Hard Disk.	—	—
4	Change PWB-MFPC.	—	—

- 16.6.91 CD004: Hard disk access error
- 16.6.92 CD005: Hard Disk Error 1
- 16.6.93 CD006: Hard Disk Error 2
- 16.6.94 CD007: Hard Disk Error 3
- 16.6.95 CD008: Hard Disk Error 4
- 16.6.96 CD009: Hard Disk Error 5
- 16.6.97 CD00A: Hard Disk Error 6
- 16.6.98 CD00B: Hard Disk Error 7
- 16.6.99 CD00C: Hard Disk Error 8
- 16.6.100 CD00D: Hard Disk Error 9
- 16.6.101 CD00E: Hard Disk Error A
- 16.6.102 CD00F: Hard disk data transfer error

Relevant Electrical Parts	
MFP Control Board (PWB-MFPC) Electronic Sorting Board (PWB-ES)	Hard Disk

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the Hard Disk connector for proper connection and correct as necessary.	—	—
2	Reinstall the hard disk.	—	—
3	Change Hard Disk.	—	—
4	Change PWB-ES.	—	—
5	Change PWB-MFPC.	—	—

16.6.103 CD010: Hard disk unformat

Relevant Electrical Parts			
MFP Control Board (PWB-MFPC)		Hard Disk	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Select "Service Mode" → "State Confirmation" → "Memory/HDD Adj." → "HDD Format."	—	—
2	Change Hard Disk.	—	—
3	Change PWB-MFPC.	—	—

16.6.104 CD011: Hard disk specifications error

Relevant Electrical Parts			
Hard Disk			
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the hard disk specifications.	—	—
2	Change the hard disk.	—	—

16.6.105 CD012: Encryption ASIC setting error

16.6.106 CD013: Encryption ASIC mounting error

Relevant Electrical Parts			
Encryption ASIC		Electronic sorting Board (PWB-ES)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the Encryption ASIC for proper installation.	—	—
2	Change the Encryption ASIC.	—	—
3	Change PWB-ES.	—	—

16.6.107 CD201: File Memory mounting failure

16.6.108 CD202: Memory capacity discrepancy

Relevant Electrical Parts			
Electronic Sorting Board (PWB-ES)		Standard Memory (D_FILE0)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check to see if the standard memory (D_FILE0) on the Electronic Sorting Board (PWB-ES) is installed correctly.	—	—
2	Change the standard memory (D_FILE0) on the Electronic Sorting Board (PWB-ES).	—	—
3	Change PWB-ES.	—	—

16.6.109 CD221: NVRAM initialization failure

16.6.110 CD222: NVRAM initialization failure

16.6.111 CD223: NVRAM initialization failure

Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Call responsible person of Develop.	—	—

16.6.112 CE002: Message and Method parameter failure

Relevant Electrical Parts			
MFP Control Board (PWB-MFPC)		Hard Disk	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the Hard Disk connector for proper connection and correct as necessary.	—	—
2	Format Hard Disk.	—	—
3	Change Hard Disk.	—	—
4	Change PWB-MFPC.	—	—

16.6.113 CEEE1: MSC undefined malfunction occurring

Relevant Electrical Parts			
MFP Control Board (PWB-MFPC)			
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the connectors on PWB-MFPC for proper connection and correct as necessary.	—	—
2	Change PWB-MFPC.	—	—

16.6.114 CEEE2: Scanner Section undefined malfunction

Relevant Electrical Parts			
Scanner Assy		CCD Sensor Board (PWB-A) Image Processing Board (PWB-C)	
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Correct the connector connection between PWB-A and PWB-C if faulty.	—	—
2	Change PWB-C.	—	—
3	Change PWB-A.	—	—

16.6.115 CEEE3: Engine Section undefined malfunction

Relevant Electrical Parts			
Control Board (PWB-MC)			
Step	Action	WIRING DIAGRAM	
		Control Signal	Location (Electrical Component)
1	Check the PWB-MC connector for proper connection and correct as necessary.	—	—
2	Change PWB-MC	—	—

17. Power supply trouble

17.1 Machine is not Energized at All (PU1 Operation Check)

Relevant Electrical Parts				
Main Power Switch (SW1) Control Board (PWB-MC)		DC Power Supply (PU1)		
Step	Check Item	WIRING DIAGRAM (Location)	Result	Action
1	Is a power voltage supplied across PJ1PU1-1 and 2 on PU1?	Q to R-4 to 5	NO	Check WIRING between the wall outlet and PJ1PU1.
2	Are the fuses (F1 and F2) on PU1 conducting?	—	NO	Change PU1.
3	Is DC24 V being output from PJ5PU1-2 on PU1?	P-4 to 5	NO	Change PU1.
4	Is DC5 V being input to PJ7PU1-1 on PU1?	Q to R-6	NO	Change PU1.
5	Is DC5 V being input to PJ1MC-7 on the Control Board? (LED on PWB-MC does not blink.)	I-13	NO	Change PU1.
			YES	Change PWB-MC

17.2 Control panel indicators do not light.

Relevant Electrical Parts				
Image Processing Board (PWB-C) Control Panel (UN201)		DC Power Supply (PU1)		
Step	Check Item	WIRING DIAGRAM (Location)	Result	Action
1	Is the I/F cable between the Scanner and engine connected properly?	—	NO	Reconnect or change the I/F cable.
2	Is a power voltage being applied across PJ1PU1-1 and 2 on PU1?	Q to R-4 to 5	NO	Check the WIRING from the wall outlet to SW1 PJ1PU1.
3	Is the fuse (F1,F2) on PU1 conducting?	—	NO	Change PU1.
4	Is DC5 V being output from PJ13PU1-1 on PU1 and DC24 V from PJ12PU1-1?	P-6 to 7	NO	Change PU1.
5	Is PJ12C on PWB-C securely connected?	Q to R-11 to 12	NO	Reconnect.
6	Is CN1UN201 on UN201 securely connected?	Y-3 to 4	NO	Reconnect.
			YES	Change UN201. Change PWB-C.

17.3 Fusing Heaters do not Operate

Relevant Electrical Parts				
Upper Right Door Switch (SW5) Fusing Unit		DC Power Supply (PU1)		
Step	Check Item	WIRING DIAGRAM (Location)	Result	Action
1	Is the power source voltage applied across PJ4PU1-1 and 3 on PU1? During this time, the Right Door should be closed.	R-6	NO	Check wiring from power outlet to SW5 to PJ4PU1.
2	Is the power source voltage applied across CN44-1 and 3, or across 2 and 3?	S-6	YES	Fusing Unit
			NO	Change PU1.

17.4 Power is not Supplied to ADF

Step	Check Item	WIRING DIAGRAM (Location)	Result	Action
1	Is DC24 V being output from CN51-1 on DF-601?	S-14	YES	Malfunction in DF-601
2	Is DC24 V being output from PJ12PU1-4 on PU1?	O to P-7	NO	Check wiring from PU1 to CN53 to ADF.
3	Is the fuse (F201) on PU1 conducting?	—	YES	Change PU1.
			NO	Change F201. Malfunction in DF-601

17.5 Power is not Supplied to Duplex

Step	Check Item	WIRING DIAGRAM (Location)	Result	Action
1	Is DC24 V being output from CN42-1 on Duplex?	J-10	NO	Malfunction in Duplex.
2	Is DC24 V being output from PJ6PU1-1 on PU1?	O to P-3	NO	Check wiring from PU1 to Duplex.
3	Is the fuse (F203) on PU1 conducting?	—	YES	Change PU1.
			NO	Change F203. Malfunction in Duplex.

17.6 Power is not Supplied to Option

17.6.1 Optional Paper Feed Cabinet

Step	Check Item	WIRING DIAGRAM (Location)	Result	Action
1	Is DC24 V being applied to hookup connector CN28-1?	O-27	NO	Malfunction in Paper Feed Cabinet
2	Is DC24 V being output from PJ6PU1-2 on PU1?	P-3	NO	Check wiring from PU1 to CN48 to Paper Feed Cabinet.
3	Is the fuse (F204) on PU1 conducting?	—	YES	Change PU1.
			NO	Change F204. Malfunction in Paper Feed Cabinet

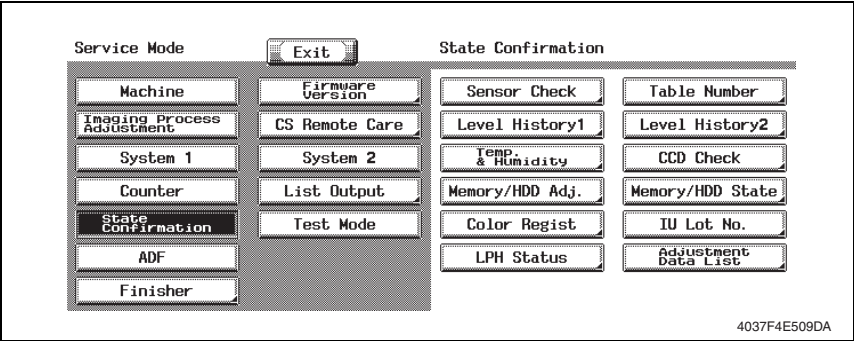
17.6.2 Finisher

Step	Check Item	WIRING DIAGRAM (Location)	Result	Action
1	Are DC24 V and DC5 V being applied to CN20-11 and CN20-1, respectively, of the Finisher?	K-14	NO	Malfunction in Finisher.
2	Are DC24 V and DC5 V being applied to PJ5PU1-9 and PJ10PU1-5 on PU1, respectively?	P-5 R-7	NO	Check wiring from PU1 to Finisher.
3	Are there continuity in the 24-V fuse (F202) and 5-V fuse (F205) on PU1?	—	YES	Change PU1.
			NO	Change F202, F205. Malfunction in Finisher.

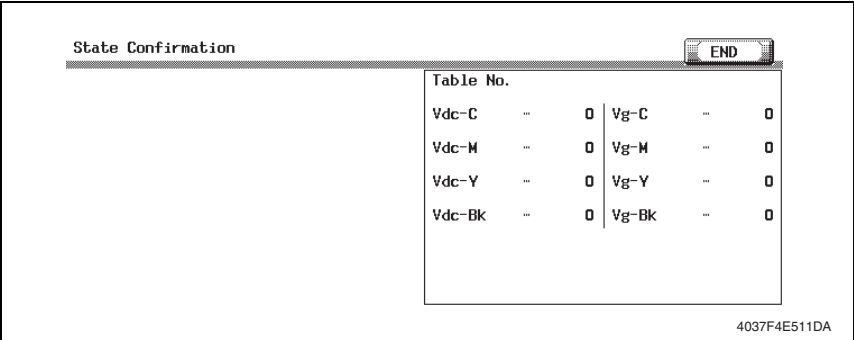
18. Image quality problem

18.1 How to read Element date

- As part of troubleshooting procedures, the numeric values set for “State Confirmation” available from “Service Mode” can be used to isolate the cause of the image problem.



18.1.1 Table Number



Vdc-C	Shows the developing bias value of each color of toner when an image is produced.
Vdc-M	Standard values: Around 390 V
Vdc-Y	A correction is made to make the image lighter when the numeric value is greater.
Vdc-K	A correction is made to make the image darker when the numeric value is smaller.
	Relevant Components: Imaging Unit, High Voltage Unit (Developing Bias)
Vg-C	Shows the grid voltage value of each color of toner when an image is produced.
Vg-M	Standard values: Around 500 V
Vg-Y	A correction is made to make the image lighter when the numeric value is greater.
Vg-K	A correction is made to make the image darker when the numeric value is smaller.
	Relevant Components: Imaging Unit, High Voltage Unit (Developing Bias)

18.1.2 Level History 1

<div>State Confirmation<div>END</div><div>Level History 1<div><div>TCR-C ... 9.90% IDC1 ... 0.00V</div><div>TCR-M ... 10.00% IDC2 ... 0.00V</div><div>TCR-Y ... 9.99% Temp-Belt ... 00</div><div>TCR-Bk ... 0.01% Temp-Press. ... 00</div></div></div></div>	
4037F4E513DA	
TCR-C TCR-M TCR-Y TCR-K	<ul style="list-style-type: none">Shows the T/C ratio (in 0.01 % increments).Standard value: 7 ± 3 %Relevant Components: LPH Unit, TCR Sensor K
IDC1 IDC2	<ul style="list-style-type: none">Shows the IDC bare surface output reading taken last (in 0.01 V increments).It should normally be around 4.3 V.The output range is 0 V to 5 V.“Reading taken last” means: Latest toner density When the Start key is pressed, the output value is displayed while a test print is being produced.Relevant Components: IDC Sensor, Transfer Belt Unit
Temp-Belt. Temp-Press.	<ul style="list-style-type: none">Shows the temperature of the Heating Roller (Temp-Belt) and the Fusing Pressure Roller (Temp-Press.) (in 5 °C increments).Relevant Components: Fusing Unit

18.1.3 Level History 2

State Confirmation

END

Level History 2

IDC Sensor Adjust1	...	0	ATVC-C	...	0
IDC Sensor Adjust2	...	0	ATVC-M	...	0
			ATVC-Y	...	0
			ATVC-Bk	...	0
			ATVC-2nd	...	0

4037F4E515DA

IDC Sensor Adjust 1 IDC Sensor Adjust 2	<ul style="list-style-type: none">Shows the IDC intensity adjustment value.It should normally be around 40 and can range from 0 to 255.The value becomes greater as the Transfer Belt Unit has been used more.Relevant Components: IDC Sensor, Transfer Belt Unit
ATVC -C ATVC -M ATVC -Y ATVC -K ATVC -2nd	<ul style="list-style-type: none">Shows the latest ATVC level (which varies according to the paper type).300 V to 3000 V (ATVC-C/-M/-Y/-K)300 V to 5000 V (ATVC-2nd)Relevant Components: Transfer Belt Unit, High Voltage Unit (Image Transfer, Neutralizing)


18.2 How to identify problematic part

- This chapter is divided into two parts: “Initial Check Items” and “Troubleshooting Procedure by a Particular Image Quality Problem.”
- When an image quality problem occurs, first go through the “Initial Check Items” and, if the cause is yet to be identified, go to “Troubleshooting Procedure by a Particular Image Quality Problem.”

18.2.1 Initial Check Items

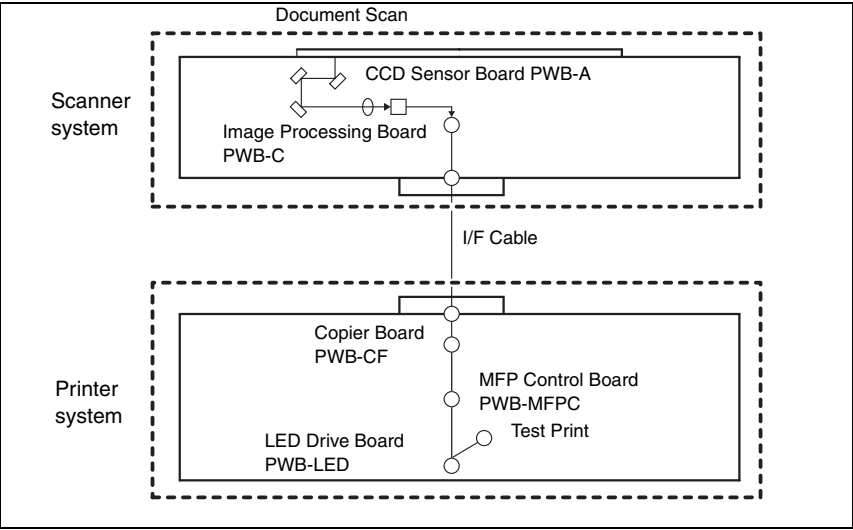
A. Initial Check Items 1

- Check first to see if image data is properly transmitted between Scanner and memory, and between memory and printer.


Action	Result	Next Step
Enter the Service Mode, select “State Confirmation” → “Memory/HDD Adj.” → “Memory Bus Check,” and select and carry out “Scanner→Memory” and “Memory→PRT” checks.	OK	Initial Check Items 2
	NG	 364 (action as instructed)

B. Initial Check Items 2

- Let the machine produce a test print and determine whether the image problem is attributable to the Scanner or printer system.

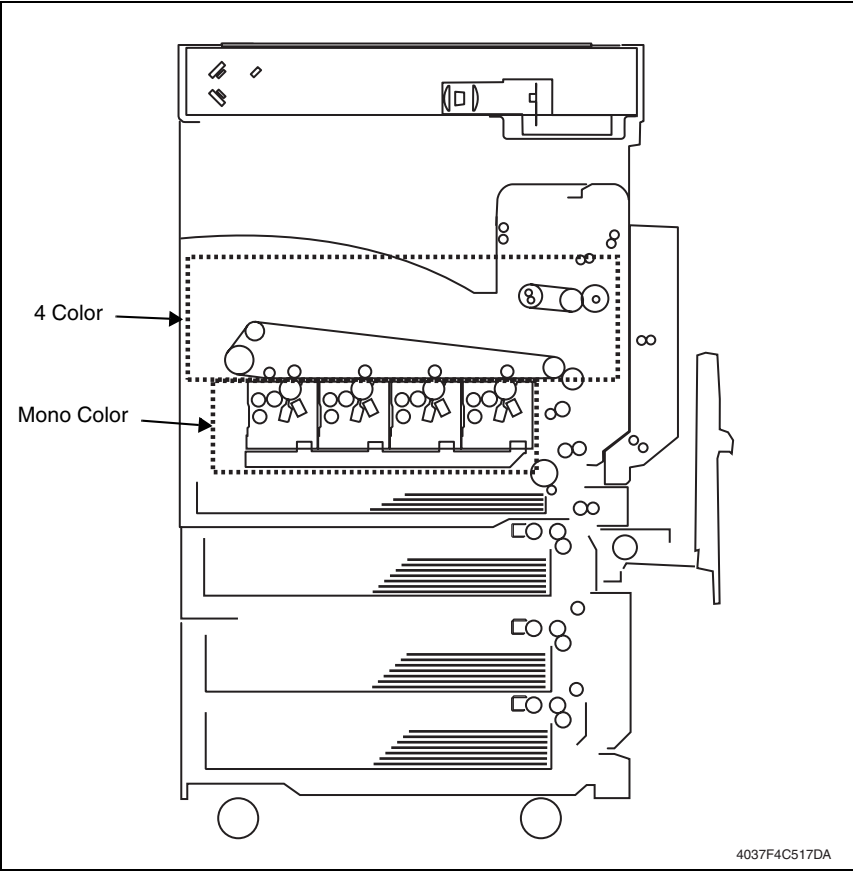


- Evaluation Procedure



Image Problem	Action	Result	Cause	Next Step
Lines, bands	From “Service Mode,” select “Test Mode” → “Halftone Pattern” → “SINGLE” → “HYPER” → “Gradation” → “C→M→Y→K” → “Density 64,” and produce a test print. Is image problem evident?	YES	Printer	Initial Check Items 3
		NO	Scanner	 379

C. Initial Check Items 3

- If the printer is responsible for the image problem, let the machine produce a test print and determine whether the image problem occurs in a specific single color or four colors



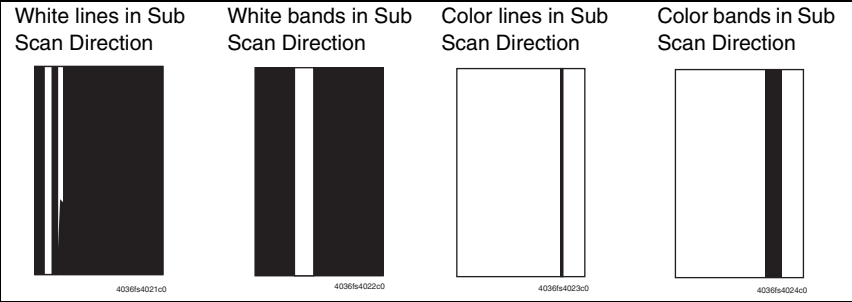
• Evaluation Procedure

Image Problem	Action	Result	Cause	Next Step
Lines, bands	From "Service Mode," select "Test Mode" → "Halftone Pattern" → "SINGLE" → "HYPER" → "Gradation" → "C→M→Y→K" → "Density 64," and produce a test print. Is image problem evident in each of all four colors?	YES	Printer, 4 colors	 408
		NO	Printer, single color	 392

18.3 Solution

18.3.1 IR System: white lines in Sub Scan Direction, white bands in Sub Scan Direction, colored lines in Sub Scan Direction, and colored bands in Sub Scan Direction

A. Typical Faulty Images

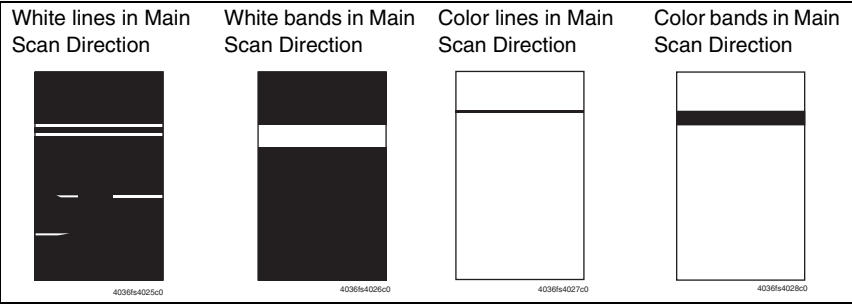


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Original	Original is damaged or dirty.	YES	Change original.
2	Original Cover	Original Pad is dirty.	YES	Clean.
3	Original Glass	Original Glass is dirty.	YES	Wipe the surface clean with a soft cloth.
4	Shading sheet	Shading sheet is dirty.	YES	Wipe the surface clean with a soft cloth.
5	Mirror, lens, Exposure Lamp, and reflectors	Mirror is dirty	YES	Clean.
		Lens is dirty	YES	Clean.
		Exposure Lamp is dirty	YES	Clean.
		Reflectors are dirty	YES	Clean.
6	Machine → Scan Area → Image Position: Side Edge (Service Mode)	The adjustment value for Image Position: Side Edge falls within the specified range.	NO	Readjust.
7		The white lines/bands or colored lines/bands are blurry.	YES	Change Scanner Assy. Change CCD Unit.

18.3.2 Scanner System: white lines in Main Scan Direction, white bands in Main Scan Direction, colored lines in Main Scan Direction, and colored bands in Main Scan Direction

A. Typical Faulty Images

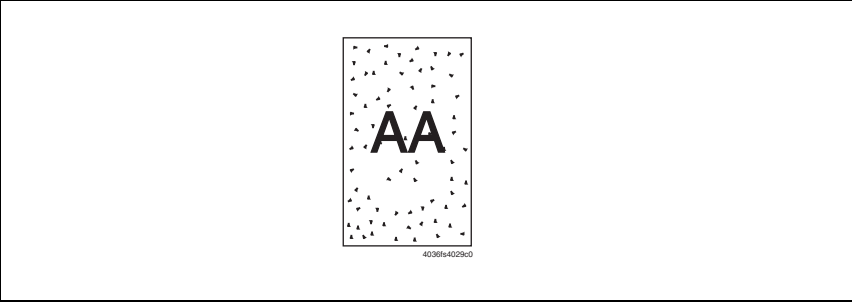


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Original	Original is damaged or dirty.	YES	Change original.
2	Original Cover	Original Pad is dirty.	YES	Clean.
3	Original Glass	Original Glass is dirty.	YES	Wipe the surface clean with a soft cloth.
4	Machine → Scan Area → Image Position: Top Edge (Service Mode)	The adjustment value for Image Position: Leading Edge falls within the specified range.	NO	Readjust.
5		The problem has been eliminated through the checks of steps up to 4.	NO	Change Scanner Assy. Change CCD Unit.

18.3.3 Scanner System: color spots

A. Typical Faulty Images

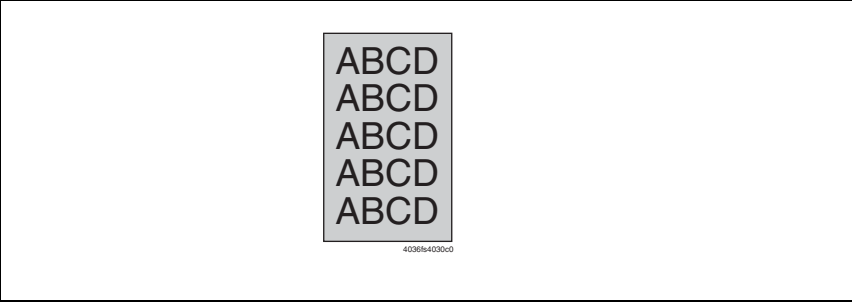


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Original	Original is damaged or dirty.	YES	Change original.
2	Original Cover	Original Pad is dirty.	YES	Clean.
3	Original Glass	Original Glass is dirty.	YES	Wipe the surface clean with a soft cloth.
4		The problem has been eliminated through the checks of steps up to 3.	NO	Change Scanner Assy. Change CCD Unit.

18.3.4 Scanner System: fog

A. Typical Faulty Images

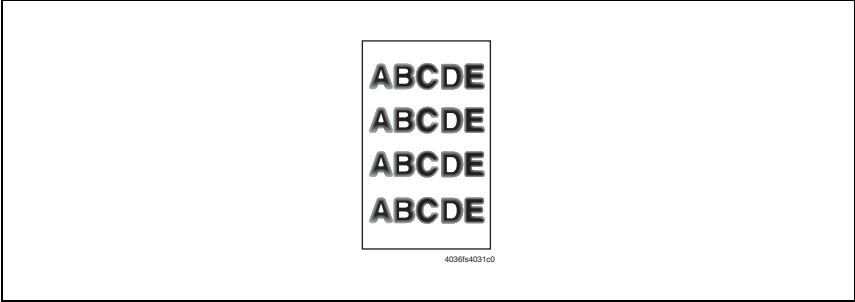


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Original	Original is damaged or dirty.	YES	Change original.
2	Original Cover	Original Pad is dirty.	YES	Clean.
3		Original Cover does not lie flat.	YES	Change Original Cover if it is deformed or hinges are broken.
4	Original Glass	Original Glass is dirty.	YES	Wipe the surface clean with a soft cloth.
5	Shading sheet	Shading sheet is dirty.	YES	Wipe the surface clean with a soft cloth.
6	Mirror, lens, Exposure Lamp, and reflectors	Mirror is dirty.	YES	Clean.
7		Lens is dirty.	YES	Clean.
8		Exposure Lamp is dirty.	YES	Clean.
9		Reflectors are dirty.	YES	Clean.
10	Basic Screen Quality/Density	The problem is eliminated when the image is produced in the Manual exposure setting.	NO	Try another exposure level in Manual.
11		The problem has been eliminated through the checks of steps up to 10.	NO	Change Scanner Assy. Change CCD Unit.

18.3.5 Scanner System: blurred image, blotchy image

A. Typical Faulty Images

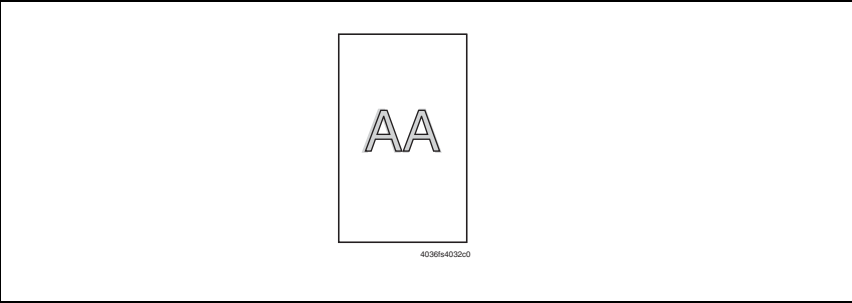


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Original	Original does not lie flat.	YES	Change original.
2	Original Cover	Original Cover does not lie flat.	YES	Change Original Cover if it is deformed or hinges are broken.
3	Original Glass	Original Glass tilts.	YES	Position Original Glass correctly. Check original loading position.
4	2nd/3rd Mirrors Carriage	Scanner is not aligned with the 2nd/3rd Mirrors Carriage.	YES	Perform "Focus Positioning of the Scanner and 2nd/3rd Mirrors Carriage" and "Scanner Position Adjustment."
5		The problem has been eliminated through the checks of steps up to 4.	NO	Change Scanner Assy. Change CCD Unit.

18.3.6 Scanner System: incorrect color image registration, sync shift (lines in main scan direction)

A. Typical Faulty Images

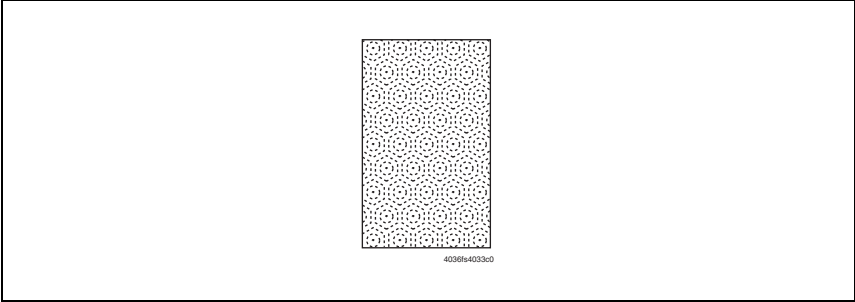


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Original	Original does not lie flat.	YES	Change original.
2	Original Cover	Original Cover does not lie flat.	YES	Change Original Cover if it is deformed or hinges are broken.
3	Slide rails	Foreign matter on rails.	YES	Clean and apply lubricant.
4	Drive Cables	Cable kinks or is damaged.	YES	Correct or change.
5	Scanner Assy	Scanner moves smoothly.	NO	Adjust the Scanner Motor timing belt. → Change bushing. → Change Scanner Motor.
6		The problem has been eliminated through the checks of steps up to 5.	NO	Change CCD Unit.

18.3.7 Scanner System: moire

A. Typical Faulty Images

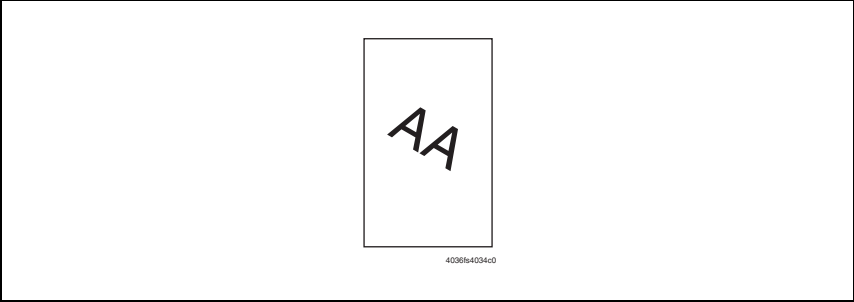


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Original	Moire distortions recur even after the orientation of original has been changed.	NO	Change the original mode (select one other than that resulted in moire).
2	Basic Screen Quality/Density	Moire distortions recur even after the original mode has been changed.	YES	Select "Text Mode" or "Photo Mode".
3	Basic Screen Zoom	The problem has been eliminated through the checks of steps up to 2.	NO	Change the zoom ratio.

18.3.8 Scanner System: skewed image

A. Typical Faulty Images

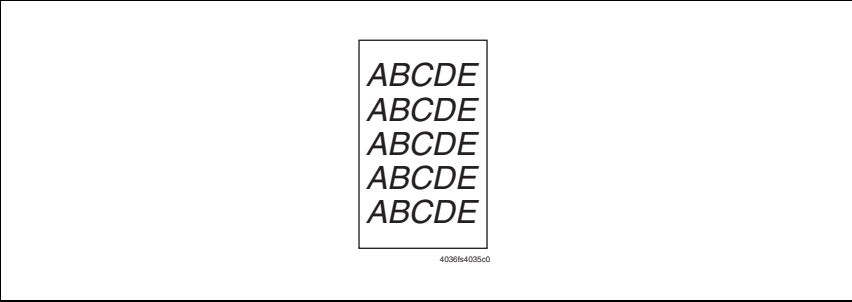


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Original	Original is skew.	YES	Reposition original.
2	Original Glass	Original Glass is in positive contact with the flat spring without being tilt.	NO	Reinstall the glass. Check the original loading position.
3	2nd/3rd Mirrors Carriage	Scanner Assy is not properly aligned with 2nd/3rd Mirrors Carriage.	YES	Perform "Focus Positioning of the Scanner and 2nd/3rd Mirrors Carriage" and "Scanner Position Adjustment."
4		The problem has been eliminated through the checks of steps up to 3.	NO	Change Scanner Assy. Change CCD Unit.

18.3.9 Scanner System: distorted image

A. Typical Faulty Images

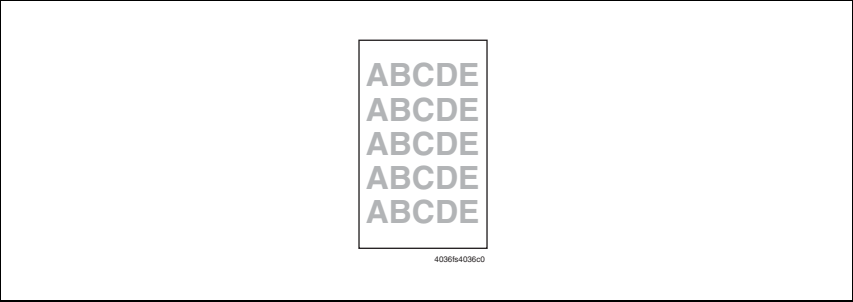


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Installation	Machine is installed on a level surface.	NO	Reinstall.
2	2nd/3rd Mirrors Carriage	Scanner Assy is not properly aligned with 2nd/3rd Mirrors Carriage.	YES	Perform "Focus Positioning of the Scanner and 2nd/3rd Mirrors Carriage" and "Scanner Position Adjustment."
3	Scanner Motor	Scanner Motor turns smoothly.	NO	Change belt. Change Scanner Motor.
4		The problem has been eliminated through the checks of steps up to 3.	NO	Change Scanner Assy. Change CCD Unit.

18.3.10 Scanner System: low image density, rough image

A. Typical Faulty Images

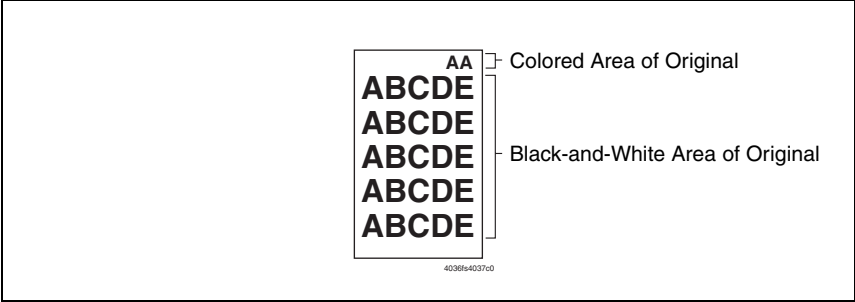


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Original	Original sticks to Original Glass.	YES	Reposition original.
2	Original Glass	Original Glass is dirty.	YES	Wipe the surface clean with a soft cloth.
3	Shading sheet	Shading sheet is dirty.	YES	Wipe the surface clean with a soft cloth.
4	Mirror, lens, Exposure Lamp, and reflectors	Mirror is dirty.	YES	Clean.
5		Lens is dirty.	YES	Clean.
6		Exposure Lamp is dirty.	YES	Clean.
7		Reflectors are dirty.	YES	Clean.
8		The problem has been eliminated through the checks of steps up to 7.	NO	Clean Exposure Lamp. → Change Scanner Assy. → Change CCD Unit.

18.3.11 Scanner System: defective ACS

A. Typical Faulty Images

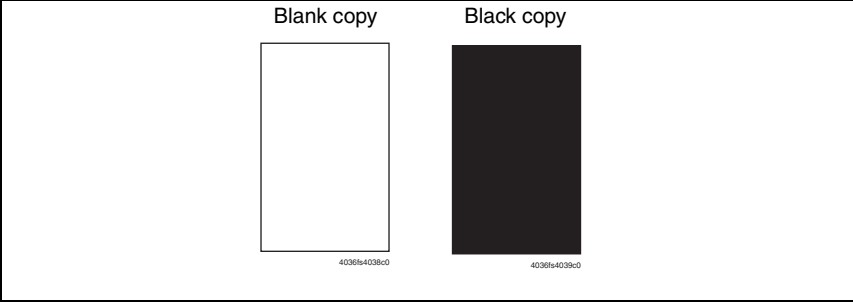


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Auto Color Level Adjustment (User Setting)	The problem persists even after the ACS Determination Level Adjust function has been changed.	YES	Change the original loading direction. Make manual settings according to the type of original. (If the original contains a colored area in one of its corners, the machine may fail to properly detect the colored area.)

18.3.12 Scanner System: blank copy, black copy

A. Typical Faulty Images

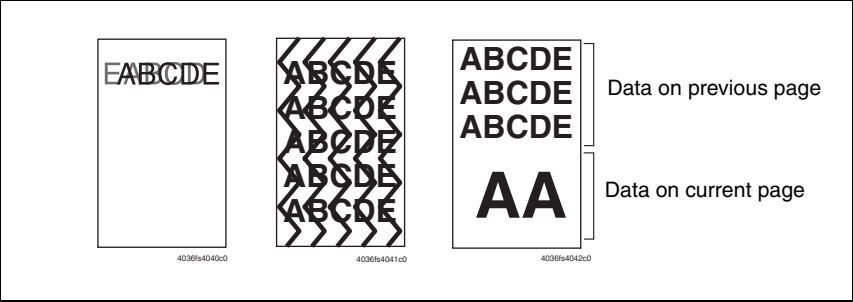


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Cable connecting Scanner and printer	Connector is connected properly with no pins bent.	NO	Reconnect.
2	Image Processing Board (PWB-C)	Connectors on the Image Processing Board are connected properly.	NO	Reconnect.
3	CCD Unit	Connectors of the CCD Unit are connected properly.	NO	Reconnect.
4	Test Mode (Service Mode)	The problem is eliminated as checked with the image on a test pattern produced.	NO	Change I/F connection cable.
5	Image Processing Board (PWB-C)	The problem is eliminated after the I/F connection cable has been changed.	NO	Change Image Processing Board.

18.3.13 Scanner System: abnormal image

A. Typical Faulty Images

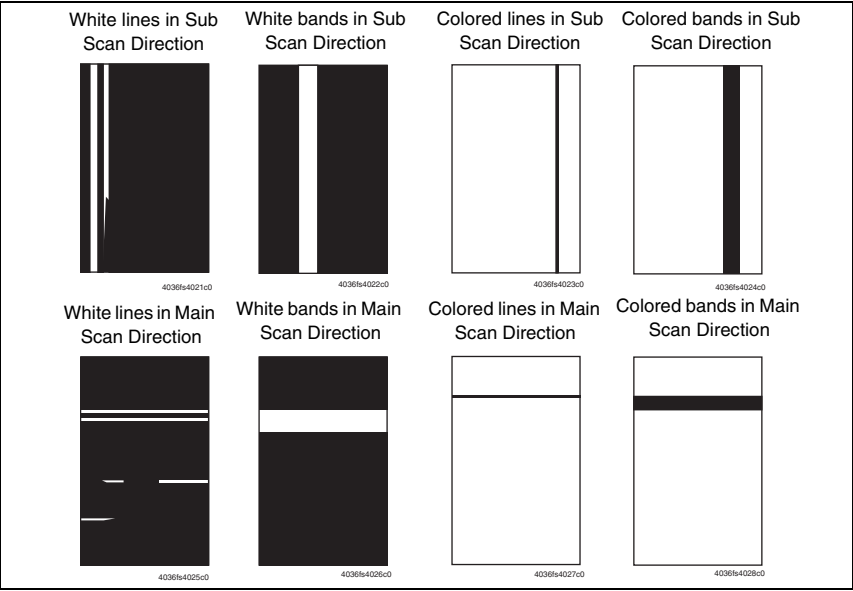


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Cable connecting Scanner and printer	Connector is connected properly with no pins bent.	NO	Reconnect.
2	Image Processing Board (PWB-C)	Connectors on the Image Processing Board are connected properly.	NO	Reconnect.
3	MFP Control Board (PWB-MFPC)	Data on previous page is mixed with data on current page.	NO	Reinstall expanded memory.
4	Test Mode (Service Mode)	The problem is eliminated as checked with the image on a test pattern produced.	NO	Change interface connection cable.
5	Image Processing Board (PWB-C)	The problem is eliminated after the interface connection cable has been changed.	NO	Change Image Processing Board.
6	MFP Control Board (PWB-MFPC)	The problem has been eliminated through the checks of steps up to 5.	NO	Change MFP Control Board.

18.3.14 Printer Monocolor: white lines in Sub Scan Direction, white bands in Sub Scan Direction, colored lines in Sub Scan Direction, white lines in Main Scan Direction, white bands in Main Scan Direction, colored lines in Main Scan Direction, colored bands in Main Scan Direction

A. Typical Faulty Images

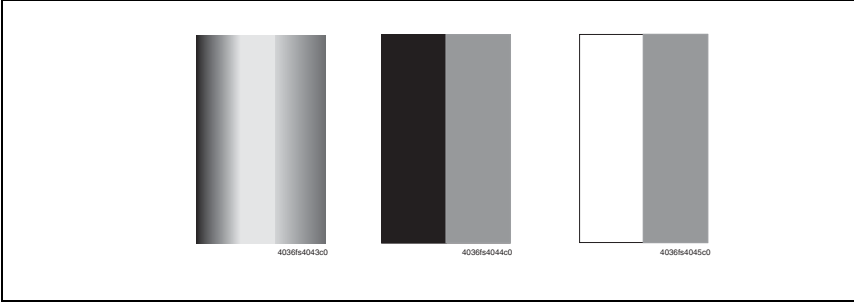


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Image check	A white line or black line in sub scan direction is sharp.	YES	Select "Service Mode" → "Machine" → "LPH Chip Adjust" and run "LPH Chip Adjust."
			NO	Clean the Comb Electrode by moving the Comb Electrode Cleaning Lever.
2	Imaging Unit	The surface of the PC Drum is scratched.	YES	Change Imaging Unit.
3	LPH Assy	The surface of the lens array is dirty.	YES	Clean with cleaning jig.
4	Imaging Unit	Dirty on the outside.	YES	Clean.
5		Connectors and contact terminals make good connection between each IU and LPH Assy.	NO	Clean contact terminals. Reconnect.
6		Developing bias contact terminal makes good connection.	NO	Clean contact terminal and check terminal position.
7	Image check	The problem has been eliminated through the checks of steps up to 6.	NO	Select "Service Mode" → "Machine" → "LPH Rank" and run "LPH Rank."
8		The problem has been eliminated through the checks of steps up to 7.	NO	Change Imaging Unit. → Change Image Transfer Belt Unit. → Change LPH Assy.

18.3.15 Printer Monocolor: uneven density in sub scan direction

A. Typical Faulty Images

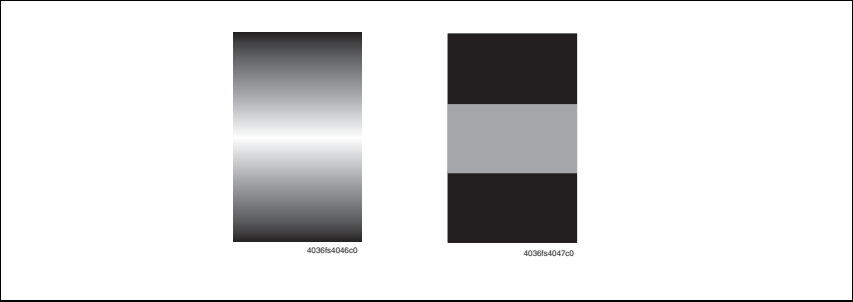


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Image check	Uneven density of void area occurs.	YES	Check LPH Unit connector for proper connection. Check the LED Drive Board connectors for proper connection.
2	High image density original	Uneven density in Sub Scan Direction occurs at a pitch of 40 mm to 50 mm when a multi-copy cycle is run using an original with high image density (50% or more).	YES	Feed 10 to 20 blank sheets of paper with no originals placed, as the IU fails to keep up with a high demand for toner.
3	LPH Assy	LED retracting lever is locked in position.	NO	Slide out the IU and reinstall.
4	Imaging Unit	The surface of the PC Drum is scratched.	YES	Change Imaging Unit.
5		Dirty on the outside.	YES	Clean.
6	LPH Assy	LED surface is dirty.	YES	Clean using the LED Cleaning Jig.
7	Image check	Monocolor uneven image (uneven high density) occurs.	YES	Select "Service Mode" → "Machine" → "LPH Rank" and run "LPH Rank."
8	Image Transfer Belt Unit	Cam gear operates properly.	NO	Change Image Transfer Belt Unit.
9		The problem has been eliminated through the checks of steps up to 8.	NO	Change IU. → Change Image Transfer Belt Unit. → Change LPH Assy. → Change Copier Board. → Change LED Drive Board → Change LPH Unit. → Change High Voltage Unit (Image Transfer, Neutralizing).

18.3.16 Printer Monocolor: uneven density in main scan direction

A. Typical Faulty Images

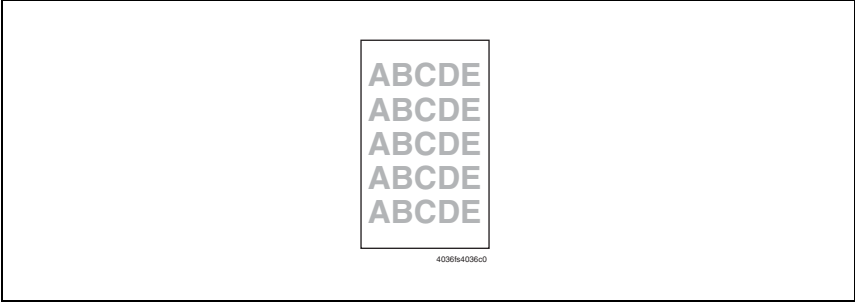


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Imaging Unit	The surface of the PC Drum is scratched.	YES	Change Imaging Unit.
2		Dirty on the outside.	YES	Clean.
3	LPH Assy	The surface of the lens array is dirty.	YES	Clean with cleaning jig.
4	Image check	Monocolor uneven image (uneven high density) occurs.	YES	Select "Service Mode" → "Machine" → "LPH Rank" and run "LPH Rank."
5	Image Transfer Belt Unit	Image Transfer Belt Unit makes positive contact with plates on rails.	NO	Check and correct contacts.
6		Cam gear operates properly.	NO	Change Image Transfer Belt Unit.
7		The problem has been eliminated through the checks of steps up to 6.	NO	Change Imaging Unit. → Change Image Transfer Belt Unit. → Change High Voltage Unit/2 (Developing Bias). → Change High Voltage Unit/1 (Image Transfer, Neutralizing).

18.3.17 Printer Monocolor: low image density

A. Typical Faulty Images



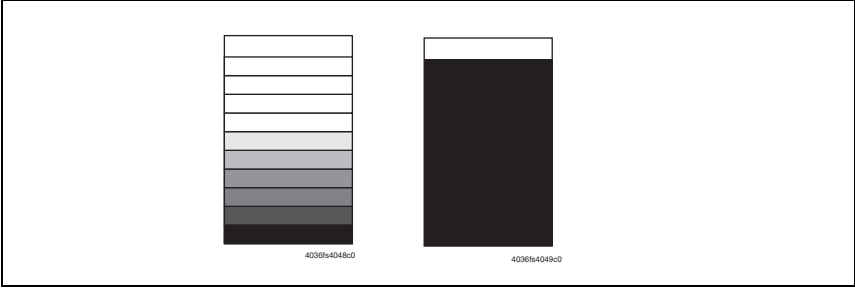
B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	State Confirm → Table Number (Service Mode)	Check data for Vg and Vdc. Color Vdc: Around 390 V Vg : Around 500 V Black Vdc: Around 390 V Vg : Around 500 V	NO	Go to next step.
2	State Confirmation → Level History 1 (Service Mode)	Check TCR data.	NO	Go to next step.
3		IDC output value is around 4.3 V.	NO	Clean IDC Sensor. Check Image Transfer Belt for damage.
4	Level History data check results	Low TCR and low Vg and Vdc	YES	Go to step 8.
5		Low TCR and high Vg and Vdc	YES	Go to step 14.
6		TCR falling within specified range and low Vg and Vdc	YES	Go to step 8.
7		TCR falling within specified range and high Vg and Vdc	YES	Go to step 14.
8	LPH Assy	LED retracting lever is locked in position.	NO	Slide out the IU and reinstall.
9	Imaging Unit	Dirty on the outside.	YES	Clean.
10	LPH Assy	The surface of the lens array is dirty.	YES	Clean with cleaning jig.
11	TCR Sensor window	The color TCR Sensor window on the LED Assy is dirty.	YES	Clean.
12	Image Transfer Belt Unit	Image Transfer Belt Unit makes positive contact with plates on rails.	NO	Check and correct contacts.
13		Cam gear operates properly.	NO	Change Image Transfer Belt Unit.
14	Hopper Unit	Connectors are loose.	YES	Reconnect.
15		Gear is cracked.	YES	Change gear.
16		Toner empty lever and/or detecting switch are defective.	YES	Clean.

Step	Section	Check Item	Result	Action
17	Image Process Adjustment → TCR Toner Supply (Service Mode)	Toner is properly supplied when TCR Toner Supply is run.	NO	Go to next step.
18	Image Process Adjustment → TCR Level Setting (Service Mode)	The problem has been eliminated when T/C has been increased.	NO	Go to next step.
19	Image Process Adjustment → Gradation Adjust (Service Mode)	"Conv. Value" falls within the specified range as checked through Gradation Adjust. Max: 0 ± 100 Highlight = 0 ± 60	YES	Go to step 23.
20	Image Process Adjustment → D Max Density (Service Mode)	The problem has been eliminated through the adjust of D Max.	NO	Go to next step.
21	Image Process Adjustment → Stabilizer → Reset + Stabilizer (Service Mode)	After the Reset + Stabilizer sequence has been completed, run Gradation Adjust; if the problem persists, make adjustments of D Max Density.	NO	Go to next step.
22		The problem has been eliminated through the checks of steps up to 22.	NO	Change Imaging Unit. → Change Image Transfer Belt Unit. → Change LPH Assy. → Change LED Drive Board. → Change Copier Board. → Change MFP Control Board → Change LPH Unit. → Change High Voltage Unit/ 2 (Developing Bias). → Change High Voltage Unit/ 1 (Image Transfer, Neutralizing).

18.3.18 Printer Monocolor: gradation reproduction failure

A. Typical Faulty Images



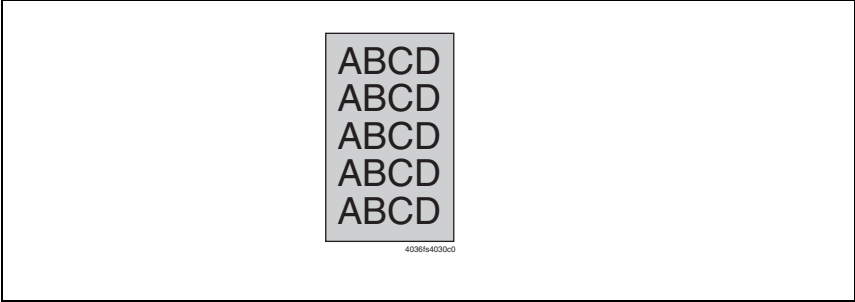
B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Photo/Density	Original type and screen pattern are selected properly.	NO	Change screen pattern.
2	LPH Assy	LED retracting lever is locked in position.	YES	Slide out the Imaging Unit and reinstall.
3	Imaging Unit	Dirty on the outside.	YES	Clean.
4	LPH Assy	The surface of the lens array is dirty.	YES	Clean with cleaning jig.
5	TCR Sensor window	TCR Sensor window is dirty.	YES	Clean.
6	State Confirmation → Level History 1 (Service Mode)	IDC output value is around 4.3 V.	NO	Clean IDC Sensor. Check Image Transfer Belt for damage.
7	Image Process Adjustment → Gradation Adjust (Service Mode)	“Conv. Value” falls within the specified range as checked through Gradation Adjust. Max: 0 ± 100 Highlight = 0 ± 60	YES	Go to step 11.
8	Image Process Adjustment → D Max Density (Service Mode)	The problem has been eliminated through the adjust of D Max.	NO	Go to next step.
9	Image Process Adjustment → Stabilizer → Reset + Stabilizer (Service Mode)	After the Reset + Stabilizer sequence has been completed, run Gradation Adjust; if the problem persists, make adjustments of D Max Density.	NO	Go to next step.

Step	Section	Check Item	Result	Action
10		The problem has been eliminated through the checks of steps up to 9.	NO	Change Imaging Unit. → Change Image Transfer Belt Unit. → Change LPH Assy. → Change LED Drive Board. → Change Copier Board. → Change MFP Control Board → Change LPH Unit. → Change High Voltage Unit/2 (Developing Bias). → Change High Voltage Unit/1 (Image Transfer, Neutralizing).

18.3.19 Printer Monocolor: foggy background

A. Typical Faulty Images



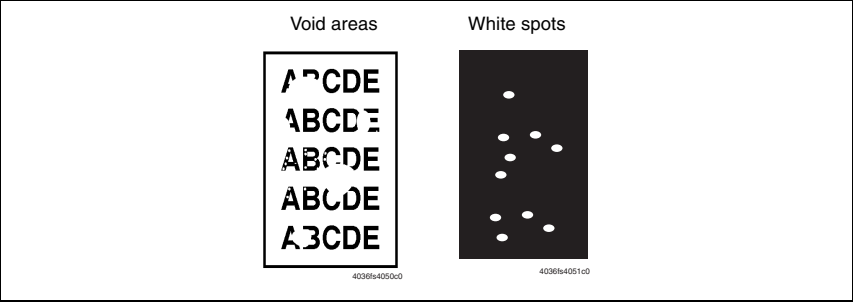
B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	State Confirmation → Table Number (Service Mode)	Check data for Vg and Vb. Color Vdc: Around 390 V Vg : Around 500 V Black Vdc: Around 390 V Vg : Around 500 V	NO	Go to next step.
2	State Confirmation → Level History 1 (Service Mode)	Check TCR data.	NO	Go to next step.
3		IDC output value is around 4.3 V.	NO	Clean IDC Sensor. Check Transfer Belt for damage.
4	Level History data check results	Low TCR and low Vg and Vdc	YES	Go to step 8.
5		Low TCR and high Vg and Vdc	YES	Go to step 12.
6		TCR falling within specified range and low Vg and Vdc	YES	Go to step 8.
7		TCR falling within specified range and high Vg and Vdc	YES	Go to step 12.
8	LPH Assy	LED retracting lever is locked in position.	NO	Slide out the IU and reinstall.
9	Imaging Unit	Dirty on the outside.	YES	Clean.
10	LPH Assy	The surface of the lens array is dirty.	YES	Clean with cleaning jig.
11	TCR Sensor window	The color TCR Sensor window on the LED Assy is dirty.	YES	Clean.
12	Image Process Adjustment → Background Voltage Margin (Service Mode)	The problem is eliminated after Background Voltage Margin has been adjusted.	NO	Go to next step.
13	Image Process Adjustment → Gradation Adjust (Service Mode)	"Conv. Value" falls within the specified range as checked through Gradation Adjust. Max: 0 ± 100 Highlight = 0 ± 60	YES	Go to step 17.


Step	Section	Check Item	Result	Action
14	Image Process Adjustment → D Max Density (Service Mode)	The problem has been eliminated through the adjust of D Max.	NO	Go to next step.
15	Image Process Adjustment → Stabilizer → Reset + Stabilizer (Service Mode)	After the Reset + Stabilizer sequence has been completed, run Gradation Adjust; if the problem persists, make adjustments of D Max Density.	NO	Go to next step.
16		The problem has been eliminated through the checks of steps up to 15.	NO	Change Imaging Unit. → Change Image Transfer Belt Unit. → Change LPH Assy. → Change LED Drive Board. → Change Copier Board. → Change MFP Control Board → Change LPH Unit. → Change High Voltage Unit/2 (Developing Bias). → Change High Voltage Unit/1 (Image Transfer, Neutralizing).

18.3.20 Printer Monocolor: void areas, white spots

A. Typical Faulty Images

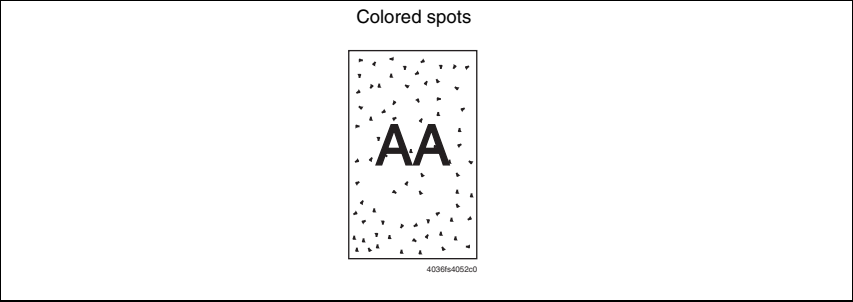


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Image Check	There are void areas at the front side or high density section.	YES	 395
2		There is void area at the rear side section.	YES	Perform "Transfer Adjust" of "Image Process Adjustment" under Service Mode.
3	Imaging Unit	The surface of the PC Drum is scratched.	YES	Change Imaging Unit.
4		Dirty on the outside.	YES	Clean.
5	Hopper Unit	Foreign matter or caked toner in the Toner Cartridge.	YES	Remove foreign matter.
6	Installation environment	Is the atmospheric pressure at the installation site low?	YES	Make the following adjustment: "Service Mode" → "Image Process Adjustment" → "Dev. Bias Choice."
7		The problem has been eliminated through the checks of steps up to 6.	NO	Change Imaging Unit.

18.3.21 Printer Monocolor: colored spots

A. Typical Faulty Images

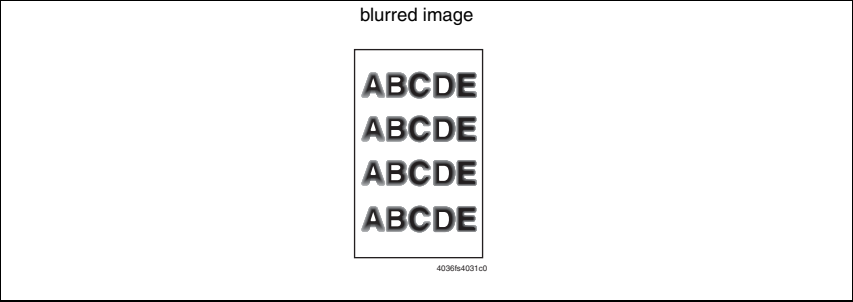


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Imaging Unit	Developing bias contact terminal makes good connection.	NO	Clean contact terminal and check terminal position.
2		The surface of the PC Drum is scratched.	YES	Change Imaging Unit.
3		Dirty on the outside.	YES	Clean.
4		The problem has been eliminated through the checks of steps up to 3.	NO	Change Imaging Unit.

18.3.22 Printer Monocolor: blurred image

A. Typical Faulty Images

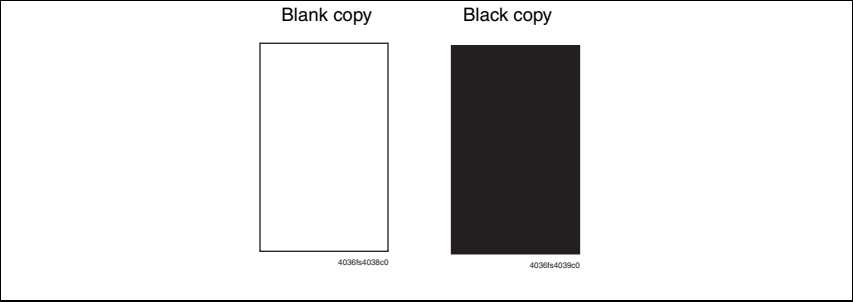


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Image Check	Image is distorted (stretched or shrunk).	YES	Select "Service Mode" → "Machine" → "Printer Area" → "Paper Feed Direction Adj."
2	LED Assy	LED retracting lever is locked in position.	NO	Slide out the IU and reinstall.
3		The surface of the lens array is dirty.	YES	Clean with cleaning jig.
4	Imaging Unit	Dirty on the outside.	YES	Clean.
5		The problem has been eliminated through the checks of steps up to 4.	NO	Change Imaging Unit. → Change LPH Assy. → Change LPH Unit.

18.3.23 Printer Monocolor: blank copy, black copy

A. Typical Faulty Images

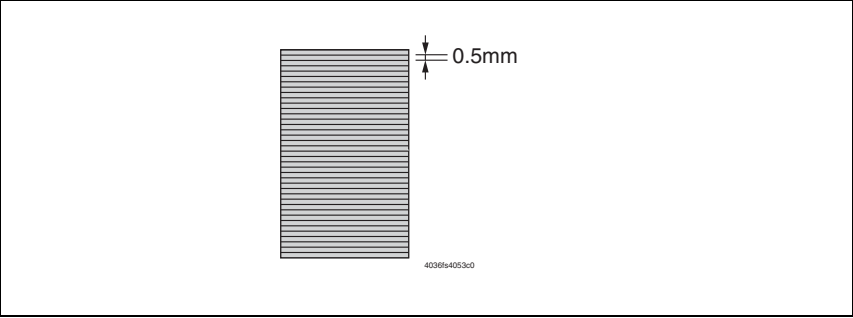


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Image Check	A blank copy occurs.	YES	Check LPH Unit connector for proper connection. Check the LED Drive Board connectors for proper connection.
2	Imaging Unit	Coupling of IU drive mechanism is installed properly.	NO	Check and correct drive transmitting coupling. Change IU.
3		The PC Drum Charge Corona voltage contact or PC Drum ground contact of the Imaging Unit is connected properly.	NO	Check, clean, or correct the contact.
4	High Voltage Unit/1 (Image Transfer, Neutralizing)	Connector is connected properly.	NO	Reconnect.
5		The problem has been eliminated through the check of step4.	NO	Change High Voltage Unit/1 (Image Transfer, Neutralizing). → Change MFP Control Board → Change Copier Board → Change LED Drive Board → Change LPH Unit.

18.3.24 Printer Monocolor: 0.5-mm-pitch uneven image

A. Typical Faulty Images

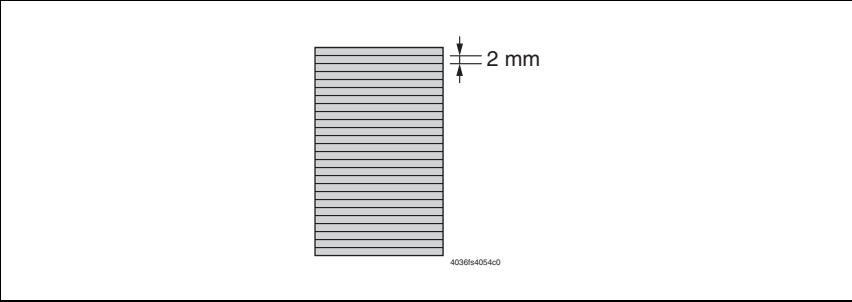


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	LPH Assy	LED retracting lever is locked in position.	NO	Slide out the IU and reinstall.
			YES	Change Imaging Unit.

18.3.25 Printer Monocolor: 2-mm-pitch uneven image

A. Typical Faulty Images

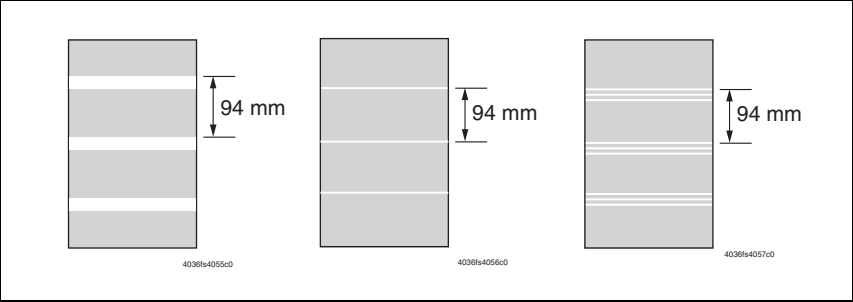


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Imaging Unit	The drive mechanisms for spent toner conveying and IU are dirty.	YES	Clean.
			NO	Change Imaging Unit.

18.3.26 Printer Monocolor: 94-mm-pitch uneven image

A. Typical Faulty Images

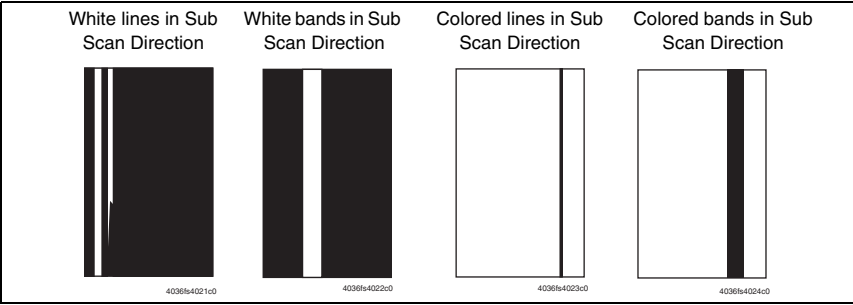


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Imaging Unit	The surface of the PC Drum is scratched.	YES	Change Imaging Unit.
2		Coupling of IU drive mechanism is installed properly.	NO	Check and correct drive transmitting coupling. Change Imaging Unit.
3		There is play in the IU Motor.	YES	Reinstall or change the IU Motor.
4	Image Transfer Belt Unit	Image Transfer Belt Unit drive gear has chipped off.	YES	Correct. Change Image Transfer Belt Unit.
5	Image Transfer Roller Unit	Image Transfer Roller is damaged.	YES	Change Image Transfer Roller Unit.
6		The problem has been eliminated through the checks of steps up to 5.	NO	Change Imaging Unit.

18.3.27 Printer 4-Color: white lines in sub scan direction, white bands in sub scan direction, colored lines in sub scan direction, and colored bands in sub scan direction

A. Typical Faulty Images

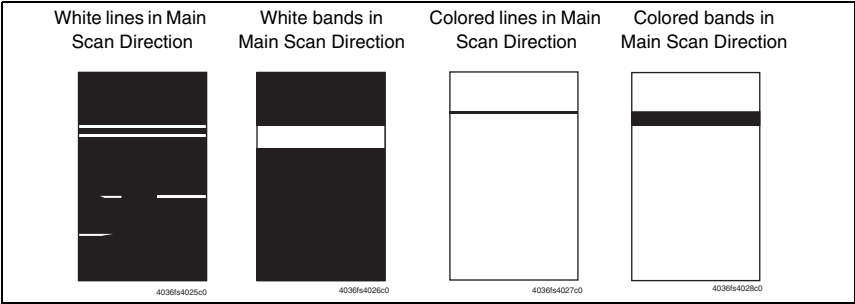


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Image Check	A white line or colored line in sub scan direction.	YES	Clean the Comb Electrode by moving the Comb Electrode Cleaning Lever.
2	Image Transfer Belt Unit	Fingerprints, oil, or other foreign matter is evident on the Image Transfer Belt.	YES	Clean with specified solvent. (See Maintenance.)
3		Image Transfer Belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change Image Transfer Belt Unit if belt is damaged.
4		Cleaning Blade is not effective in removing toner completely.	YES	Clean Cleaning Blade. change Image Transfer Belt Unit.
5	Image Transfer Roller Unit	Image Transfer Roller is dirty or scratched.	YES	Change Image Transfer Roller Unit.
6	Paper path	There is foreign matter on paper path.	YES	Remove foreign matter.
7		Image Transfer Paper Separator Fingers are damaged or dirty.	YES	Clean or change.
8	Paper Dust Remover	Paper dust accumulates on Paper Dust Remover.	YES	Clean.
9	Fusing Unit	Fusing Entrance Guide Plate is dirty or damaged.	YES	Clean. Change Fusing Unit.
10		Fusing Paper Separator Fingers are dirty.	YES	Clean.
11		The problem has been eliminated through the checks of steps up to 10.	NO	Change Image Transfer Roller Unit. → Change Image Transfer Belt Unit. → Change MFP Control Board

18.3.28 Printer 4-Color: white lines in main scan direction, white bands in main scan direction, colored lines in main scan direction, and colored bands in main scan direction

A. Typical Faulty Images

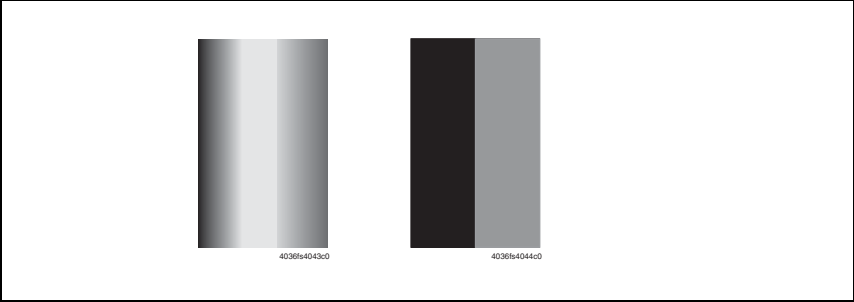


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Image Transfer Belt Unit	Fingerprints, oil, or other foreign matter is evident on the Image Transfer Belt.	YES	Clean with specified solvent. (See Maintenance.)
2		Image Transfer Belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change Image Transfer Belt Unit if belt is damaged.
3		Cleaning Blade is not effective in removing toner completely.	YES	Clean Cleaning Blade. change Image Transfer Belt Unit.
4	Image Transfer Roller Unit	Image Transfer Roller is dirty or scratched.	YES	Change Image Transfer Roller Unit.
5	Paper path	There is foreign matter on paper path.	YES	Remove foreign matter.
6		Image Transfer Paper Separator Fingers are damaged or dirty.	YES	Clean or change.
7	Paper Dust Remover	Paper dust accumulates on Paper Dust Remover.	YES	Clean or change.
8	Fusing Unit	Fusing Entrance Guide Plate is dirty or damaged.	YES	Clean. Change Fusing Unit.
9		Fusing Paper Separator Fingers are dirty.	YES	Clean.
10		The problem has been eliminated through the checks of steps up to 9.	NO	Change Image Transfer Roller Unit. → Change Image Transfer Belt Unit. → Change MFP Control Board

18.3.29 Printer 4-Color: uneven density in sub scan direction

A. Typical Faulty Images

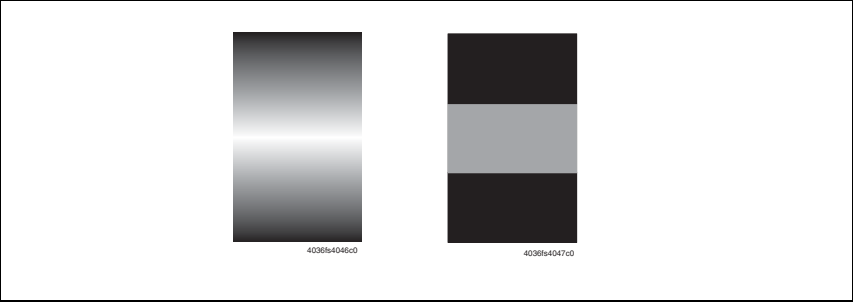


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Image Transfer Belt Unit	Fingerprints, oil, or other foreign matter is evident on the Image Transfer Belt.	YES	Clean with specified solvent. (See Maintenance.)
2		Image Transfer Belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change Image Transfer Belt Unit if belt is damaged.
3		Terminal is dirty.	YES	Clean.
4	Image Transfer Roller Unit	Image Transfer Roller is installed properly.	NO	Reinstall.
5		Image Transfer Roller is dirty or scratched.	YES	Change Image Transfer Roller Unit.
6		The problem has been eliminated through the checks of steps up to 5.	NO	Change Image Transfer Roller Unit. Change Image Transfer Belt Unit.

18.3.30 Printer 4-Color: uneven density in main scan direction

A. Typical Faulty Images

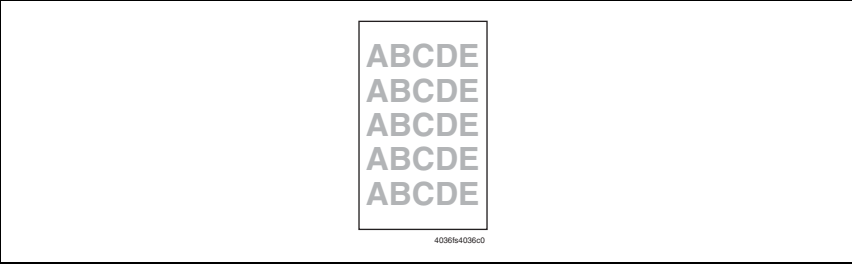


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Image Transfer Belt Unit	Fingerprints, oil, or other foreign matter is evident on the Image Transfer Belt.	YES	Clean with specified solvent. (See Maintenance.)
2		Image Transfer Belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change Image Transfer Belt Unit if belt is damaged.
3		Terminal is dirty.	YES	Clean.
4	Image Transfer Roller Unit	Image Transfer Roller is installed properly.	NO	Reinstall.
5		Image Transfer Roller is dirty or scratched.	YES	Change Image Transfer Roller Unit.
6		The problem has been eliminated through the checks of steps up to 5.	NO	Change Image Transfer Roller Unit. → Change Image Transfer Belt Unit. → Change High Voltage Unit/2 (Developing Bias). → Change High Voltage Unit/1 (Image Transfer, Neutralizing).

18.3.31 Printer 4-Color: low image density

A. Typical Faulty Images



B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Paper	Paper is damp.	YES	Change paper to one just unwrapped from its package. Install Paper Dehumidifying Heater.
2	Image Transfer Belt Unit	Terminal is dirty.	YES	Clean.
3	Image Transfer Roller Unit	Image Transfer Roller is installed properly.	NO	Reinstall.
4		Image Transfer Roller is dirty or scratched.	NO	Change Image Transfer Roller Unit.
5	IDC Sensor	Sensor is dirty.	YES	Clean with blower brush.
6	Image Process Adjustment → Gradation Adjust (Service Mode)	“Conv. Value” falls within the specified range as checked through Gradation Adjust. Max: 0 ± 100 Highlight: 0 ± 60	YES	Go to step 10.
7	Image Process Adjustment → D Max Density (Service Mode)	The problem has been eliminated through the adjust of D Max Density.	NO	Go to next step.
8	Image Process Adjustment → Stabilizer → Reset + Stabilizer (Service Mode)	After the Reset + Stabilizer sequence has been completed, run Gradation Adjust; if the problem persists, make adjustments of D Max Density.	NO	Go to next step.
9		The problem has been eliminated through the checks of steps up to 8.	NO	Change Image Transfer Roller Unit. → Change Image Transfer Belt Unit. → Change MFP Control Board → Change High Voltage Unit/2 (Developing Bias). → Change High Voltage Unit/1 (Image Transfer, Neutralizing).

18.3.32 Printer 4-Color: poor color reproduction

A. Typical Faulty Images

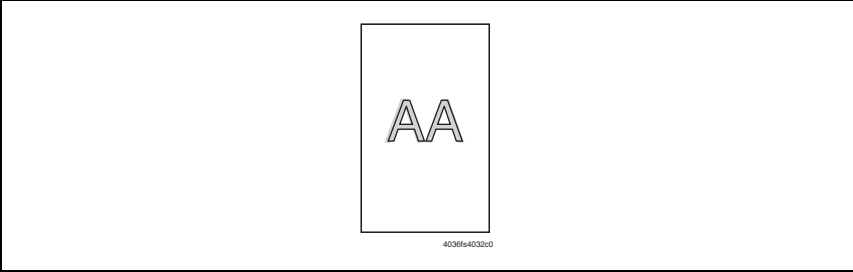


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Paper	Paper is damp.	YES	Change paper to one just unwrapped from its package. Install Paper Dehumidifying Heater.
2	Image Transfer Belt Unit	Terminal is dirty.	YES	Clean.
3	Image Transfer Roller Unit	Image Transfer Roller is installed properly.	NO	Reinstall.
4		Image Transfer Roller is dirty or scratched.	NO	Change Image Transfer Roller Unit.
5	IDC Sensor	Sensor is dirty.	YES	Clean with blower brush.
6	Image Process Adjustment → Gradation Adjust (Service Mode)	"Conv. Value" falls within the specified range as checked through Gradation Adjust. Max: 0 ± 100 Highlight: 0 ± 60	YES	Go to step 10.
7	Image Process Adjustment → D Max Density (Service Mode)	The problem has been eliminated through the adjust of D Max Density.	NO	Go to next step.
8	Image Process Adjustment → Stabilizer → Reset + Stabilizer (Service Mode)	After the Reset + Stabilizer sequence has been completed, run Gradation Adjust; if the problem persists, make adjustments of D Max Density.	NO	Go to next step.
9		The problem has been eliminated through the checks of steps up to 8.	NO	Change Image Transfer Roller Unit. → Change Image Transfer Belt Unit. → Change MFP Control Board → Change High Voltage Unit/2 (Developing Bias). → Change High Voltage Unit/1 (Image Transfer, Neutralizing).

18.3.33 Printer 4-Color: incorrect color image registration

A. Typical Faulty Images

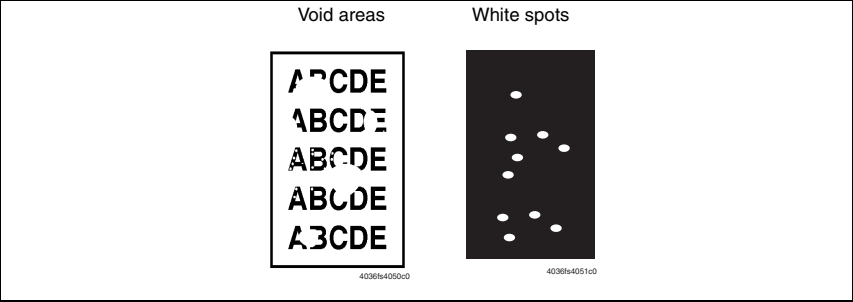


B. Troubleshooting Procedure


Step	Section	Check Item	Result	Action
1	Warning display	The maintenance call mark is displayed on the panel.	YES	Take action according to the warning code shown on the State Confirm screen.
2	Machine condition	Vibration is given to the machine after main power switch has been turned ON.	YES	Turn OFF and ON Main Power Switch.
3	LPH Assy	LED retracting lever is locked in position.	NO	Slide out the IU and reinstall.
4	Image Transfer Belt Unit	Fingerprints, oil, or other foreign matter is evident on the Image Transfer Belt.	YES	Clean with specified solvent. (See Maintenance.)
5		Image Transfer Belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change Image Transfer Belt Unit if belt is damaged.
6		Drive coupling to the machine is dirty.	YES	Clean.
7	Imaging Unit	The surface of the PC Drum is scratched.	YES	Change Imaging Unit.
8	Image Transfer Roller Unit	Image Transfer Roller is installed properly.	NO	Reinstall.
9		Image Transfer Roller is dirty or scratched.	YES	Change Image Transfer Roller Unit.
10	Machine → Fusing Transport Speed (Service Mode)	Brush effect or blurred image occurs.	YES	Readjust Fusing Transport Speed.
11	Machine → Color registration Adjustment (Service Mode)	Check the specific color in which color shift occurs.	YES	Perform "Color registration Adjustment." If color shift is not corrected even with a correction of ± 1 dot, go to next step.
12		The problem has been eliminated through the checks of steps up to 11.	NO	Change Image Transfer Roller Unit. → Change Image Transfer Belt Unit. → Change MFP Control Board

18.3.34 Printer 4-Color: void areas, white spots

A. Typical Faulty Images

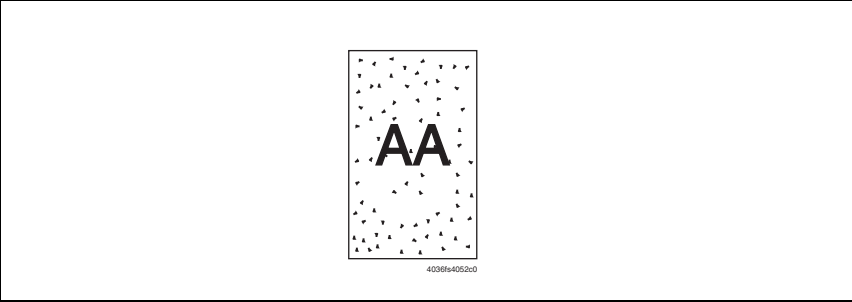


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Image Check	There are void areas at the front side or high density section.	YES	 413
2		There are void areas in the trailing edge.	YES	Perform "Transfer Adjust" of "Image Process Adjustment" under Service Mode.
3	Transfer Belt Unit	Fingerprints, oil, or other foreign matter is evident on the Transfer Belt.	YES	Clean with specified solvent. (See Maintenance.)
4		Transfer Belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change Transfer Belt Unit if belt is damaged.
5	Transfer Roller Unit	Transfer Roller is dirty or scratched.	YES	Change Transfer Roller Unit.
6		Charge Neutralizing Cloth is not separated and ground terminal is connected properly.	NO	Correct or change.
7	Paper path	There is foreign matter on paper path.	YES	Remove foreign matter.
8		Pre-Image Transfer Guide Plate is damaged or dirty.	YES	Clean or change.
9	Paper Dust Remover	Paper dust accumulates on Paper Dust Remover.	YES	Clean or change.
10		The problem has been eliminated through the checks of steps up to 9.	NO	Change Image Transfer Roller Unit. Change Image Transfer Belt Unit.

18.3.35 Printer 4-Color: colored spots

A. Typical Faulty Images

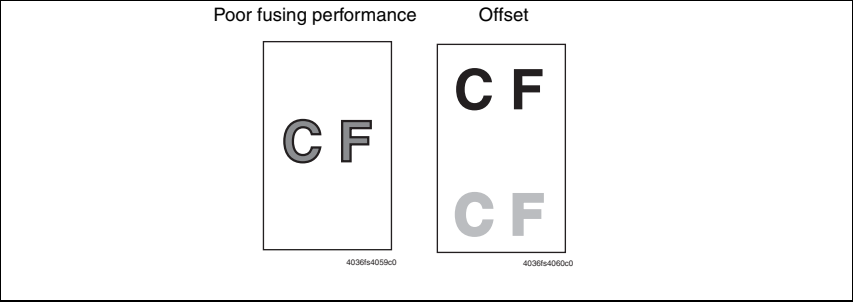


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Imaging Unit	The surface of the PC Drum is scratched.	YES	Change Imaging Unit.
2	Image Transfer Belt Unit	Fingerprints, oil, or other foreign matter is evident on the Image Transfer Belt.	YES	Clean with specified solvent. (See Maintenance.)
3		Image Transfer Belt is dirty or scratched.	YES	Clean dirty belt with a soft cloth. Change Image Transfer Belt Unit if belt is damaged.
4	Image Transfer Roller Unit	Image Transfer Roller is dirty or scratched.	YES	Change Image Transfer Roller Unit.
5	Paper path	There is foreign matter on paper path.	YES	Remove foreign matter.
6	Paper Dust Remover	Paper dust accumulates on Paper Dust Remover.	YES	Clean or change.
7	Fusing Unit	Fusing Belt is dirty or scratched.	YES	Change Fusing Unit.
8		The problem has been eliminated through the checks of steps up to 7.	NO	Change Image Transfer Roller Unit. → Change Image Transfer Belt Unit. → Change Fusing Unit.

18.3.36 Printer 4-Color: poor fusing performance, offset

A. Typical Faulty Images

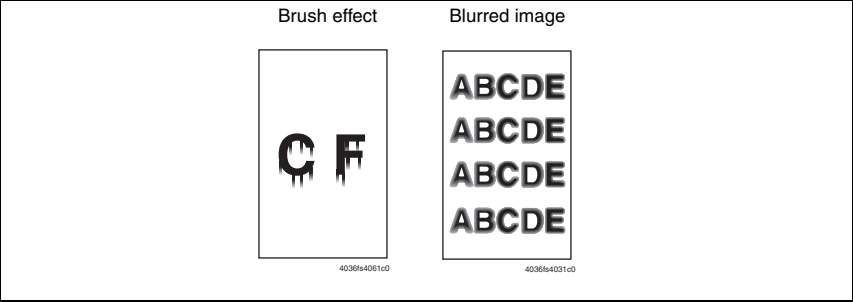


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Paper	Paper type does not match.	YES	Change the setting.
2	Machine → Fusing Temperature (Service Mode)	Changing fusing temperature eliminates the problem of poor fusing performance and offset.	YES	Readjust Fusing Temperature.
3		The problem has been eliminated through the checks of steps up to 2.	NO	Change Fusing Unit.

18.3.37 Printer 4-Color: brush effect, blurred image

A. Typical Faulty Images

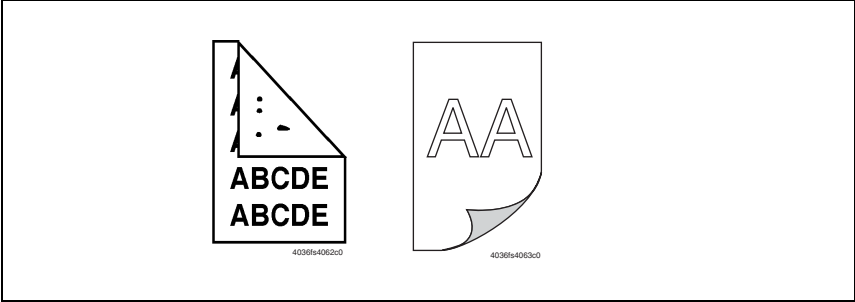


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Paper	Paper is damp.	YES	Change paper to one just unwrapped from its package. Install Paper Dehumidifying Heater.
2		Paper type does not match.	YES	Change the setting.
3	Fusing Unit	Fusing Entrance Guide Plate is dirty.	YES	Clean.
4		Fusing Belt is dirty or scratched.	YES	Change Fusing Unit.
5	Machine → Fusing Transport Speed (Service Mode)	Changing fusing speed eliminates the problem of brush effect and blurred image.	YES	Readjust Fusing Transport Speed.
6		The problem has been eliminated through the checks of steps up to 5.	NO	Change Fusing Unit.

18.3.38 Printer 4-Color: back marking

A. Typical Faulty Images

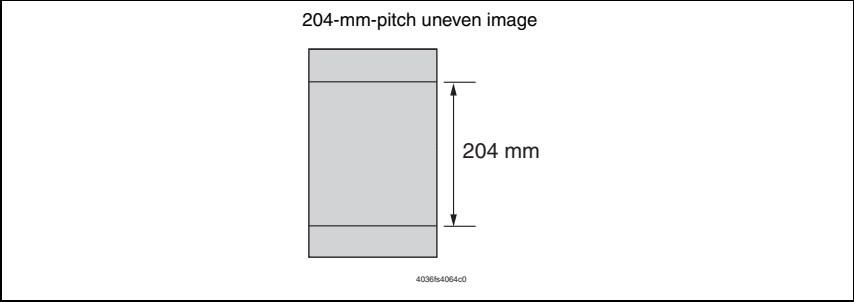


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Image Transfer Roller Unit	Image Transfer Roller is scratched or dirty.	YES	Change Image Transfer Roller Unit.
2	Paper path	There is foreign matter on paper path.	YES	Remove foreign matter.
3	Fusing Unit	Fusing Entrance Guide Plate is scratched or dirty.	YES	Clean or change.
4		Lower Fusing Roller is scratched or dirty.	YES	Change Fusing Unit.
5	Transfer Belt Unit	Fingerprints, oil, or other foreign matter is evident on the Transfer Belt.	YES	Clean with specified solvent. (See Maintenance.)
6		The problem has been eliminated through the checks of steps up to 5.	NO	Change Image Transfer Roller Unit. → Change Image Transfer Belt Unit. → Change Fusing Unit. → Change High Voltage Unit/1 (Image Transfer, Neutralizing).

18.3.39 Printer 4-Color: 204-mm-pitch uneven image

A. Typical Faulty Images

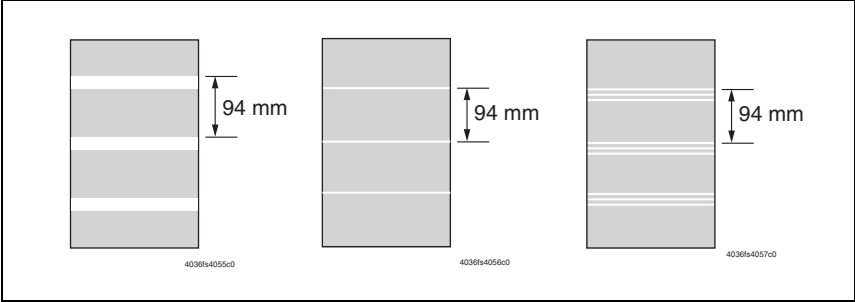


B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Fusing Unit	The Fusing Belt is scratchy.	YES	Change Fusing Unit.

18.3.40 Printer 4-Color: 94-mm-pitch uneven image

A. Typical Faulty Images



B. Troubleshooting Procedure

Step	Section	Check Item	Result	Action
1	Imaging Unit	The surface of the PC Drum is scratched.	YES	Change Imaging Unit.
2	Image Transfer Belt Unit	The Image Transfer Belt Unit drive gear is intact.	NO	Correct. Change Image Transfer Belt Unit.
3	Image Transfer Roller Unit	Image Transfer Roller is damaged.	YES	Change Image Transfer Roller Unit.

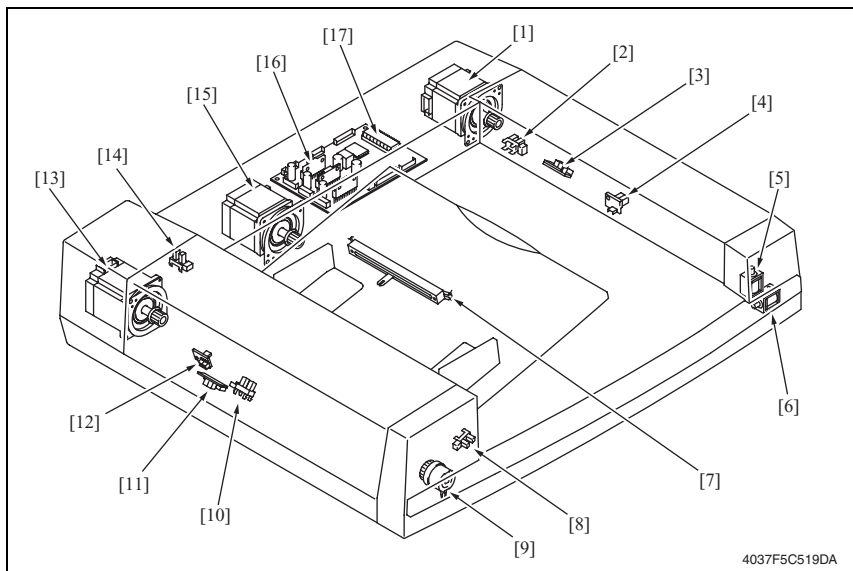
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Appendix

19. Parts layout drawing

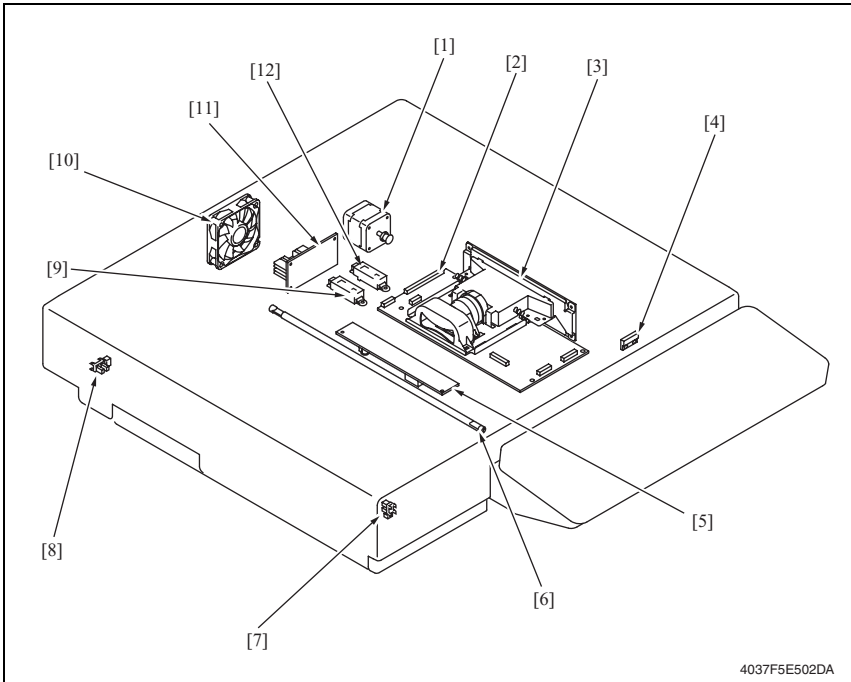
19.1 Main unit

19.1.1 ADF section



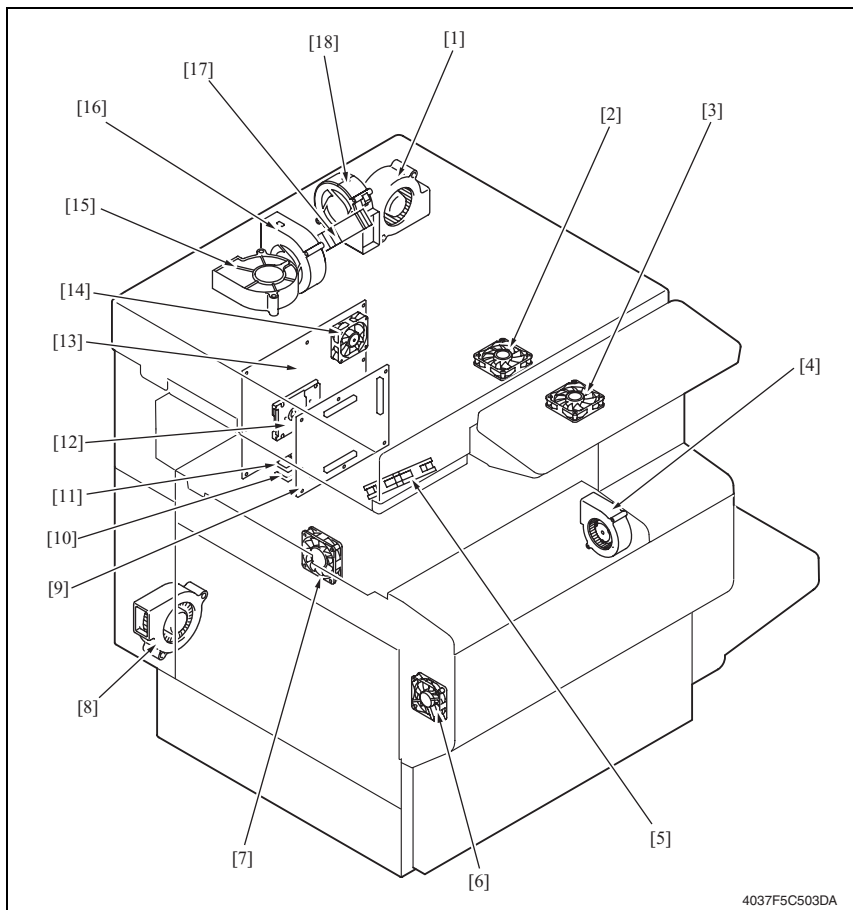
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|-------------------------------------|------------------------------------|
| [1] Exit Motor (M3-DF) | [10] Empty Sensor (PC4-DF) |
| [2] Exit Cover Sensor (PC7-DF) | [11] Pick-up Sensor (PC2-DF) |
| [3] Exit Sensor (PC6-DF) | [12] Registration Sensor (PC1-DF) |
| [4] Turnover Sensor (PC5-DF) | [13] Take-up Motor (M1-DF) |
| [5] Exit Solenoid (SL2-DF) | [14] Take-up Cover Sensor (PC3-DF) |
| [6] Turnover Solenoid (SL1-DF) | [15] Transport Motor (M2-DF) |
| [7] Document Size Volume (R1-DF) | [16] Control Board (PWB-A DF) |
| [8] Tray Open/Close Sensor (PC8-DF) | [17] ROM (IC7-DF) |
| [9] Registration Clutch (CL1-DF) | |

19.1.2 IR section

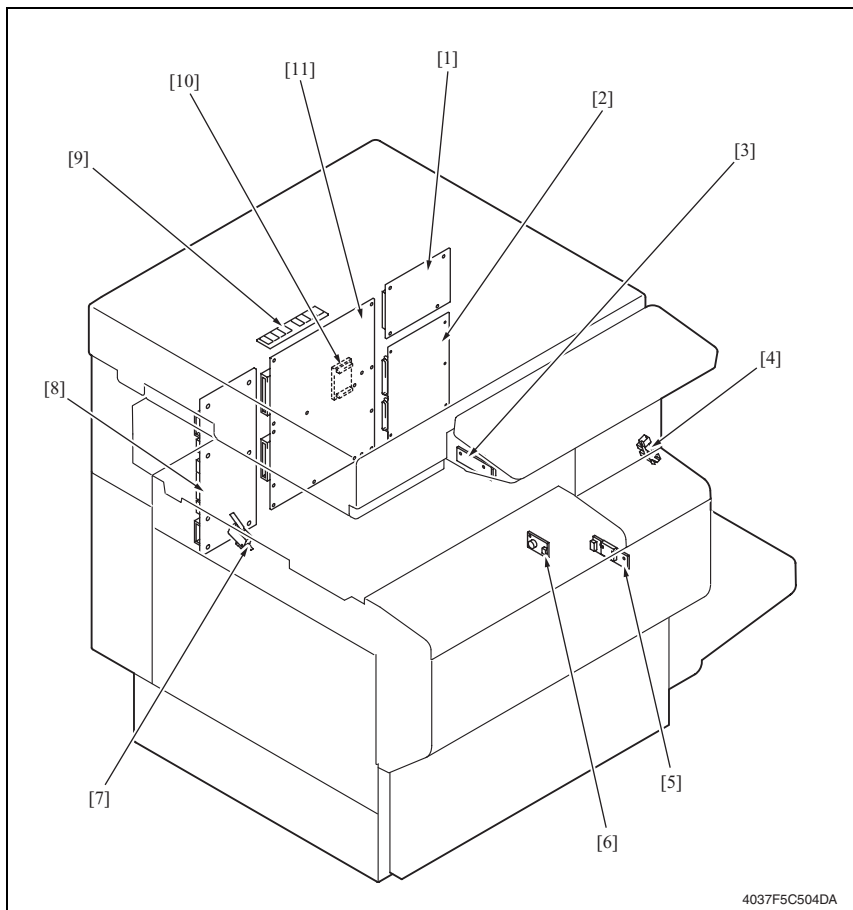


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|------------------------------------|---|
| [1] Scanner Motor (M201) | [7] Scanner Home Sensor (PC201) |
| [2] Image Processing Board (PWB-C) | [8] Original Cover Angle Sensor (PC202) |
| [3] CCD Sensor Board (PWB-A) | [9] Original Size Sensor FD1 (PC203) |
| [4] Size Reset Switch (SW201) | [10] Scanner Cooling Fan Motor (M202) |
| [5] Inverter Board (PU201) | [11] Scanner Motor Drive Board (PWB-IC) |
| [6] Exposure Lamp (FL201) | [12] Original Size Sensor FD2 (PC204) |

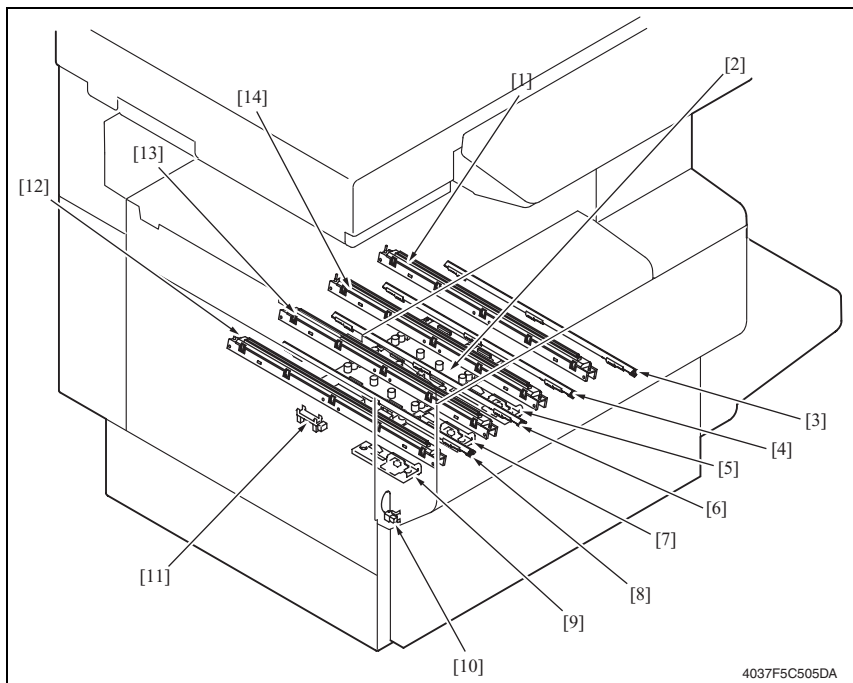
19.1.3 Engine section



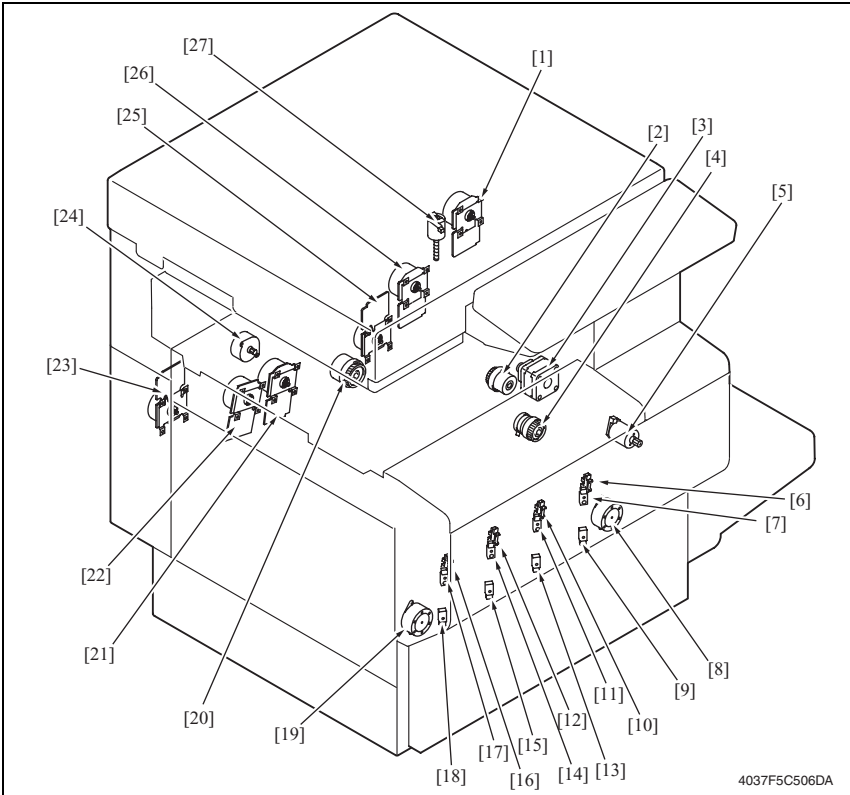
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|--|--|
| [1] Fusing Cooling Fan Motor/1 (M9) | [10] Standard Memory (D_FILE0) |
| [2] Fusing Cooling Fan Motor/2 (M15) | [11] Standard Memory (D_FILE0) |
| [3] Fusing Cooling Fan Motor/3 (M16) | [12] Hard Disk Drive (HDD) |
| [4] Suction Fan Motor (M12) | [13] Control Board (PWB-MC) |
| [5] Cooling Fan Motor/1 (M24) | [14] MFP Control Board Cooling Fan Motor (M27) |
| [6] Cooling Fan Motor/3 (M25) | [15] Toner Suction Fan Motor (M20) |
| [7] Power Supply Cooling Fan Motor (M21) | [16] Toner Suction Fan Motor/K (M23) |
| [8] Ozone Ventilation Fan Motor (M18) | [17] Cooling Fan Motor/2 (M10) |
| [9] Electronic sorting Board (PWB-ES) | [18] Paper Cooling Fan Motor (M26) |



- | | |
|--|-------------------------------------|
| [1] LAN Board (PWB-LAN) | [7] Left Door Switch (SW3) |
| [2] Copier Board (PWB-CF) | [8] Slide Interface Board (PWB-SIF) |
| [3] IDC/Registration Sensor/2 (PC9) | [9] Work Memory (D_WORK0) |
| [4] Fusing Pressure/Retraction Sensor (PC33) | [10] NVRAM Board (PWB-NVR) |
| [5] IDC/Registration Sensor/1 (PC8) | [11] MFP Control Board (PWB-MFPC) |
| [6] Temperature/humidity Sensor (PC7) | |

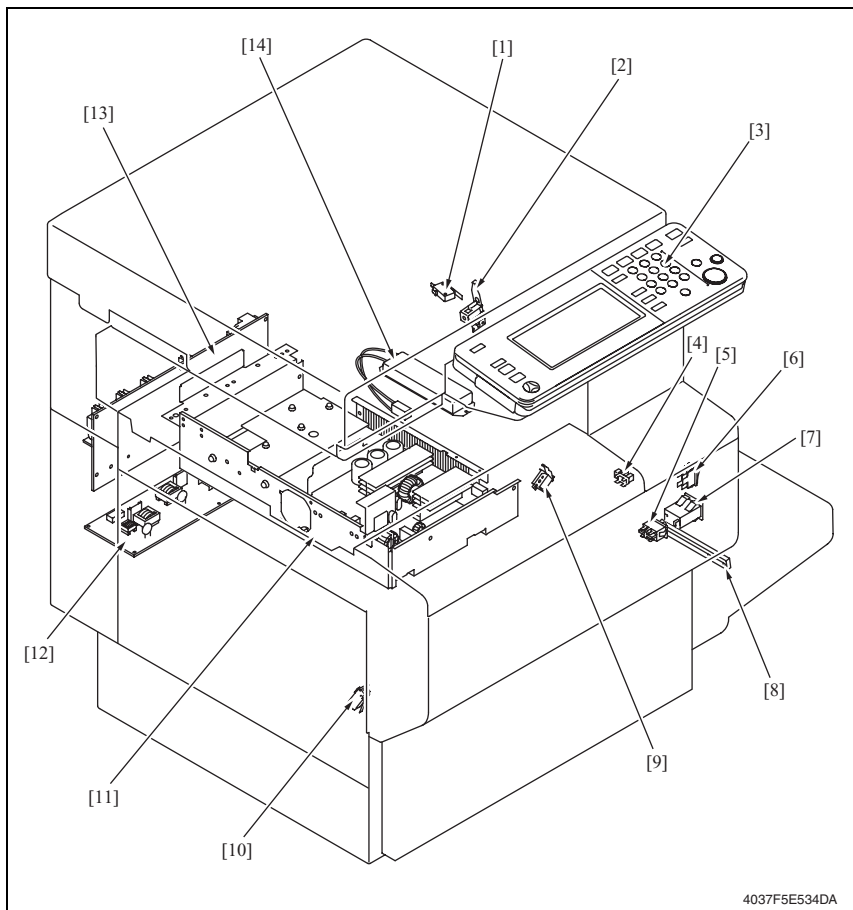


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|-------------------------------|---|
| [1] LPH Assy/K (LPH K) | [8] Main Erase Lamp/Y (LA1) |
| [2] LED Drive Board (PWB-LED) | [9] ATDC Sensor/Y (PWB-N1) |
| [3] Main Erase Lamp/K (LA4) | [10] Waste Toner Bottle Set Sensor (PC32) |
| [4] Main Erase Lamp/C (LA3) | [11] Waste Toner Full Sensor (PC31) |
| [5] ATDC Sensor/C (PWB-N3) | [12] LPH Assy/Y (LPH Y) |
| [6] Main Erase Lamp/M (LA2) | [13] LPH Assy/M (LPH M) |
| [7] ATDC Sensor/M (PWB-N2) | [14] LPH Assy/C (LPH C) |



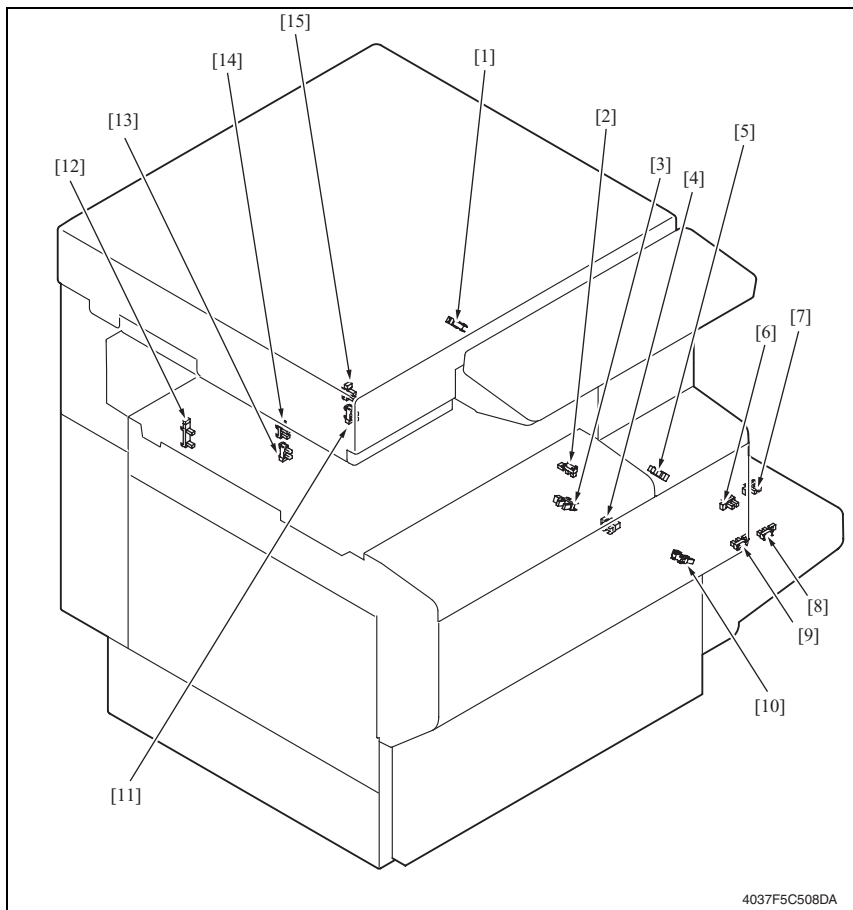
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- | | |
|--|---|
| [1] Fusing Drive Motor (M2) | [15] Toner Near-Empty Sensor PQ/M (PC16) |
| [2] Registration Roller Clutch (CL3) | [16] Toner Set Sensor/Y (PC25) |
| [3] Intermediate Transport Motor (M14) | [17] Toner Near-Empty Sensor LED/Y (PC21) |
| [4] Bypass Paper Feed Clutch (CL101) | [18] Toner Near-Empty Sensor PQ/Y (PC15) |
| [5] 2nd Image Transfer Pressure/Retraction Motor (M13) | [19] Toner Supply Motor Y/M (M4) |
| [6] Toner Set Sensor/K (PC20) | [20] Developing Clutch/K (CL2) |
| [7] Toner Near-Empty Sensor LED/K (PC24) | [21] Color PC Drum Motor (M5) |
| [8] Toner Supply Motor C/K (M3) | [22] Color Developing Motor (M6) |
| [9] Toner Near-Empty Sensor PQ/K (PC18) | [23] Cleaning Brush Motor (M22) |
| [10] Toner Set Sensor/C (PC19) | [24] 1st Image Transfer Pressure/Retraction Motor (M11) |
| [11] Toner Near-Empty Sensor LED/C (PC23) | [25] K PC Motor (M7) |
| [12] Toner Set Sensor/M (PC26) | [26] Main Motor (M1) |
| [13] Toner Near-Empty Sensor PQ/C (PC17) | [27] Fusing Pressure Roller Pressure/Retraction Motor (M19) |
| [14] Toner Near-Empty Sensor LED/M (PC22) | |



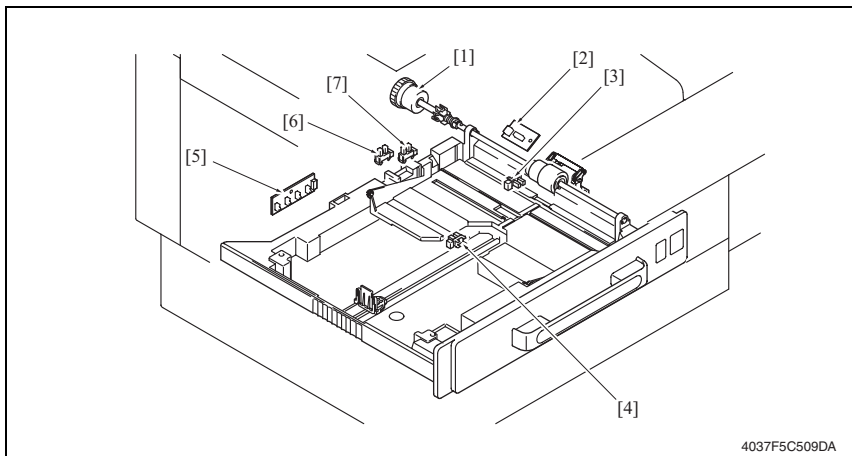
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- | | |
|--|--|
| [1] Right Door Switch (SW2) | [8] Bypass Paper Size Unit (VR1) |
| [2] Fusing Paper Loop Control Solenoid (SL1) | [9] Bypass Paper Pick-Up Solenoid (SL101) |
| [3] Control Panel (UN201) | [10] Front Door Switch (SW4) |
| [4] Fusing Paper Loop Sensor (PC4) | [11] DC Power Supply (PU1) |
| [5] Upper Right Door Switch (SW5) | [12] High Voltage Unit/2 (HV2) |
| [6] Main Power Switch (SW1) | [13] High Voltage Unit/1 (HV1) |
| [7] Counter/K (CNT1) | [14] Flickerless Resistor (R2)
(220-240 V areas only) |

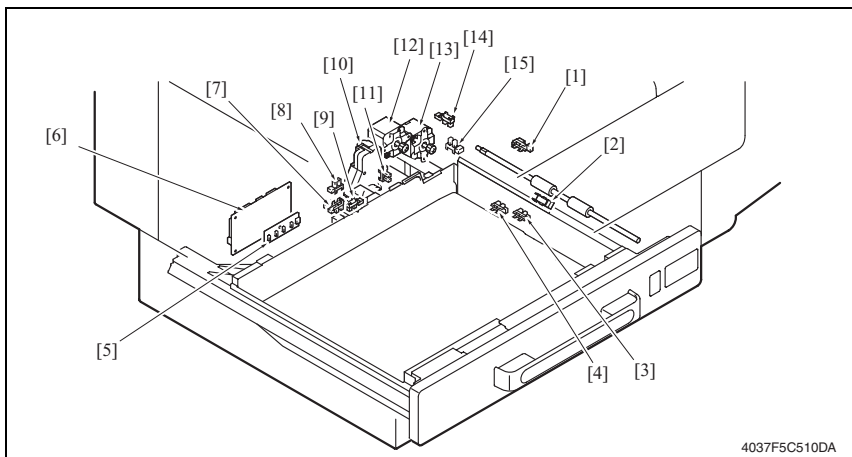


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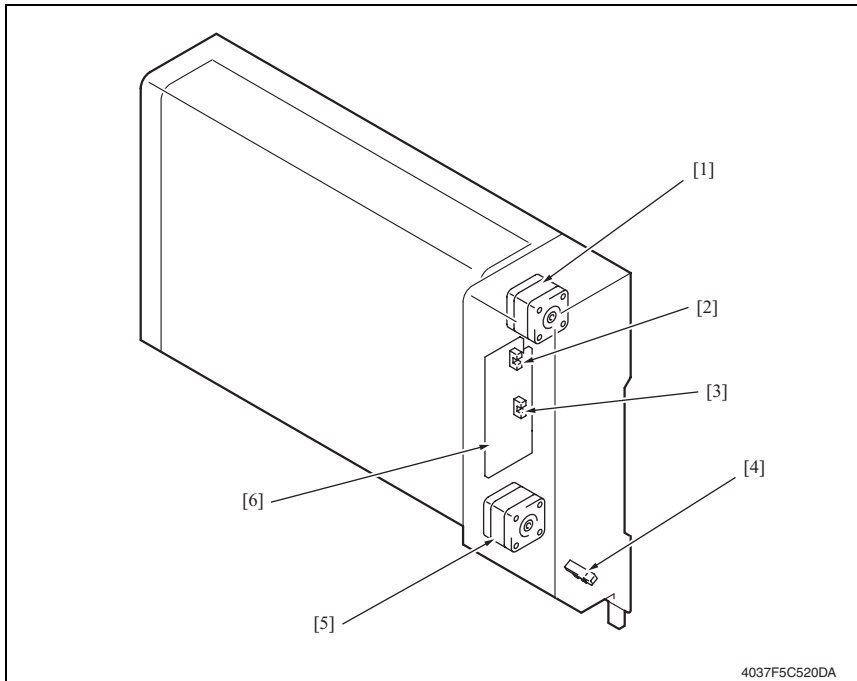
- | | |
|---|---|
| [1] Fusing Retraction Position Sensor (PC34) | [9] Bypass FD Paper Size Sensor/2 (PC112) |
| [2] Registration Roller Sensor (PC28) | [10] Bypass Paper Empty Sensor (PC110) |
| [3] 2nd Image Transfer Pressure /Retraction Sensor (PC29) | [11] K PC Drum Main Sensor (PC11) |
| [4] OHP Sensor (PC27) | [12] 1st Image Transfer Retraction (PC12) |
| [5] Exit Sensor (PC30) | [13] Color PC Drum Main Sensor (PC10) |
| [6] Bypass FD Paper Size Sensor/4 (PC114) | [14] Color PC Drum Sub Sensor (PC35) |
| [7] Bypass FD Paper Size Sensor/3 (PC113) | [15] K PC Drum Sub Sensor (PC36) |
| [8] Bypass FD Paper Size Sensor/1 (PC111) | |

19.1.4 Tray 1

- | | |
|---------------------------------------|---|
| [1] Tray 1 Paper Feed Clutch (CL1) | [5] Tray 1 Paper Size Board (PWB-I1) |
| [2] Tray 1 Double Feed Sensor (PC1) | [6] Tray 1 Paper Near-Empty Sensor (PC13) |
| [3] Tray 1 Paper Empty Sensor (PC2) | [7] Tray 1 Set Sensor (PC14) |
| [4] Tray 1 CD Paper size Sensor (PC3) | |

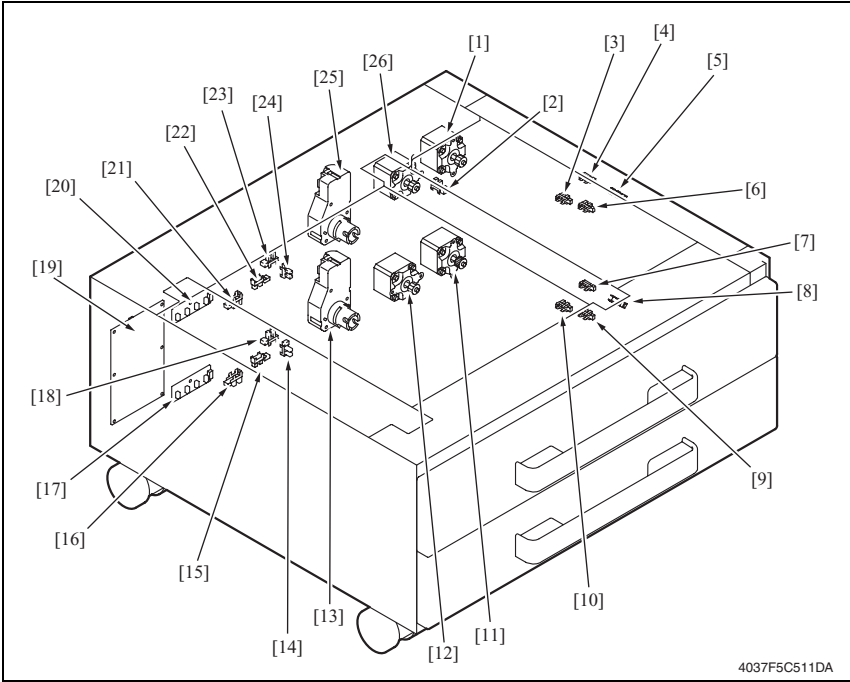
19.1.5 Tray 2

- | | |
|--|---|
| [1] Tray 2 Vertical Transport Sensor (PC108) | [9] Tray 2 CD Paper Size Sensor/S (PC101) |
| [2] Tray 2 Paper Take-Up Sensor (PC107) | [10] Tray 2 Lift-Up Motor (M101) |
| [3] Tray 2 Paper Empty Sensor (PC106) | [11] Tray 2 Paper Near-Empty Sensor (PC104) |
| [4] Tray 2 Lift-Up Sensor(PC105) | [12] Tray 2 Paper Feed Motor (M102) |
| [5] Tray 2 Paper Size Board (PWB-I2) | [13] Tray 2 Vertical Transport Motor (M103) |
| [6] Tray 2 Board (PWB-Z) | [14] Bypass Lift-Up Sensor (PC115) |
| [7] Tray 2 CD Paper Size Sensor/L (PC102) | [15] Tray 2 Door Set sensor (PC109) |
| [8] Tray 2 Set Sensor (PC103) | |

19.1.6 Duplex section

- | | |
|--|---|
| [1] Switchback Motor (M1-DU) | [4] Duplex Unit Transport Sensor 2 (PC1-DU) |
| [2] Duplex Unit Door Set Sensor (in PWB-A) (PI2-DU) | [5] Duplex Unit Transport Motor (M2-DU) |
| [3] Duplex Unit Transport Sensor 1 (in PWB-A) (PI1-DU) | [6] Duplex Control Board (PWB-A DU) |

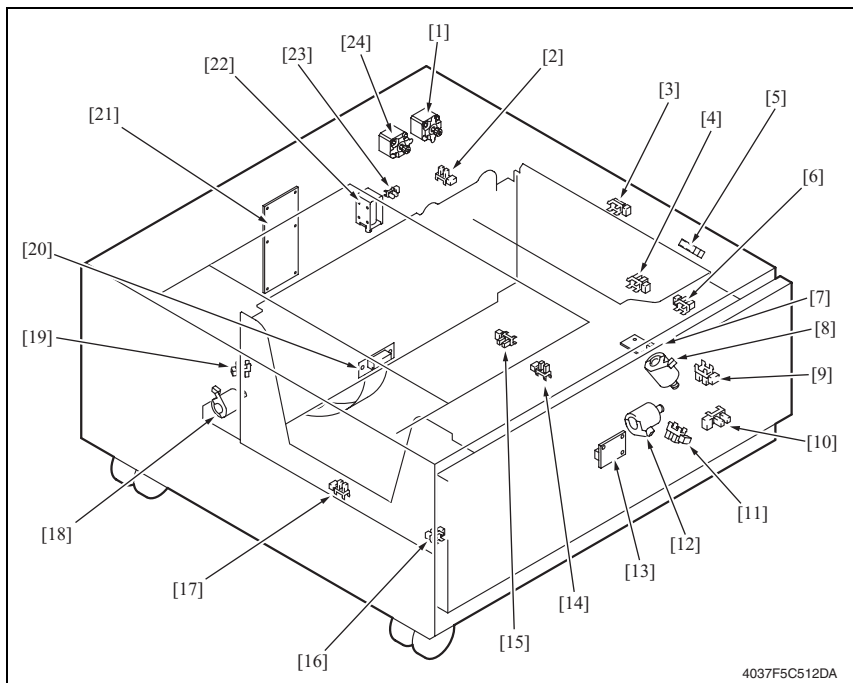
19.2 PC102/PC202 (Option)



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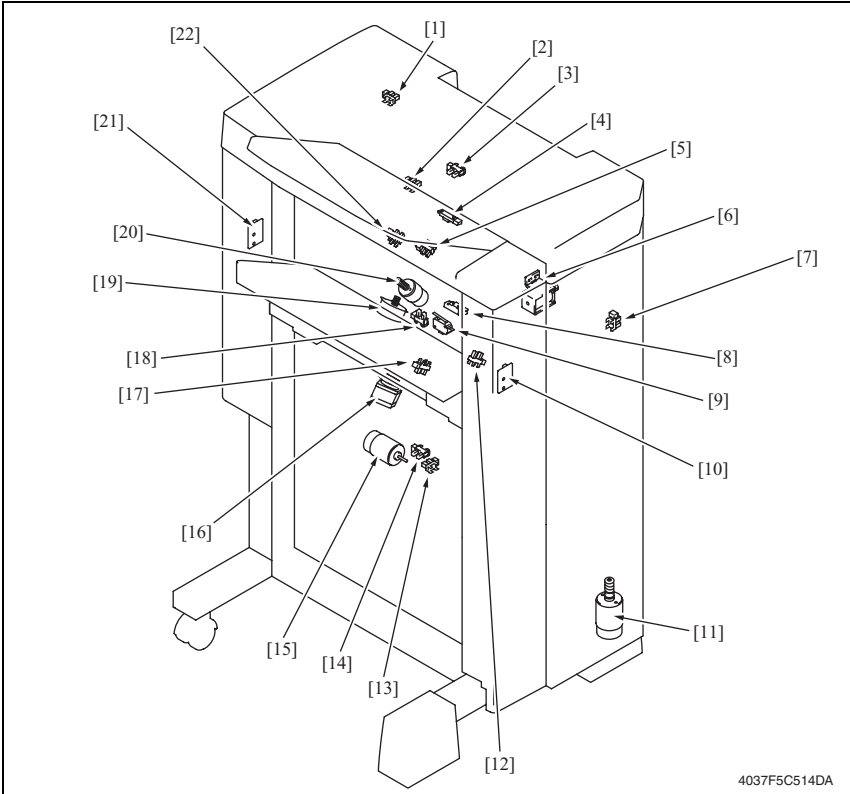
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|--|---|
| [1] Tray 3 Transport Roller Motor (M120-PF) | [14] Tray 4 Paper Near-Empty Sensor (PC122-PF) |
| [2] Door Set Sensor (PC111-PF) | [15] Tray 4 CD Paper Size Sensor 2 (PC128-PF) |
| [3] Tray 3 Lift-Up Upper Limit Sensor (PC114-PF) | [16] Tray 4 CD Paper Size Sensor 1 (PC127-PF) |
| [4] Tray 3 Vertical Transport Sensor (PC117-PF) | [17] Tray 4 FD Paper Size Detection Board (PWB-I4 PF) |
| [5] Tray 3 Paper Take-Up Sensor (PC116-PF) | [18] Tray 4 Set Sensor (PC121-PF) |
| [6] Tray 3 Paper Empty Sensor (PC115-PF) | [19] Main Control Board (PWB-C2 PF) |
| [7] Tray 4 Vertical Transport Sensor (PC126-PF) | [20] Tray 3 FD Paper Size Detection Board (PWB-I3 PF) |
| [8] Tray 4 Paper Take-Up Sensor (PC125-PF) | [21] Tray 3 CD Paper Size Sensor 1 (PC118-PF) |
| [9] Tray 4 Paper Empty Sensor (PC124-PF) | [22] Tray 3 CD Paper Size Sensor 2 (PC119-PF) |
| [10] Tray 4 Lift-Up Sensor (PC123-PF) | [23] Tray 3 Set Sensor (PC112-PF) |
| [11] Tray 4 Transport Roller Motor (M121-PF) | [24] Tray 3 Paper Near-Empty Sensor (PC113-PF) |
| [12] Tray 4 Paper Feed Motor (M123-PF) | [25] Lift-Up Motor 1 (M124-PF) |
| [13] Tray 4 Lift-Up Motor (M125-PF) | [26] Tray 3 Paper Feed Motor (M122-PF) |

19.3 PC-402 (Option)

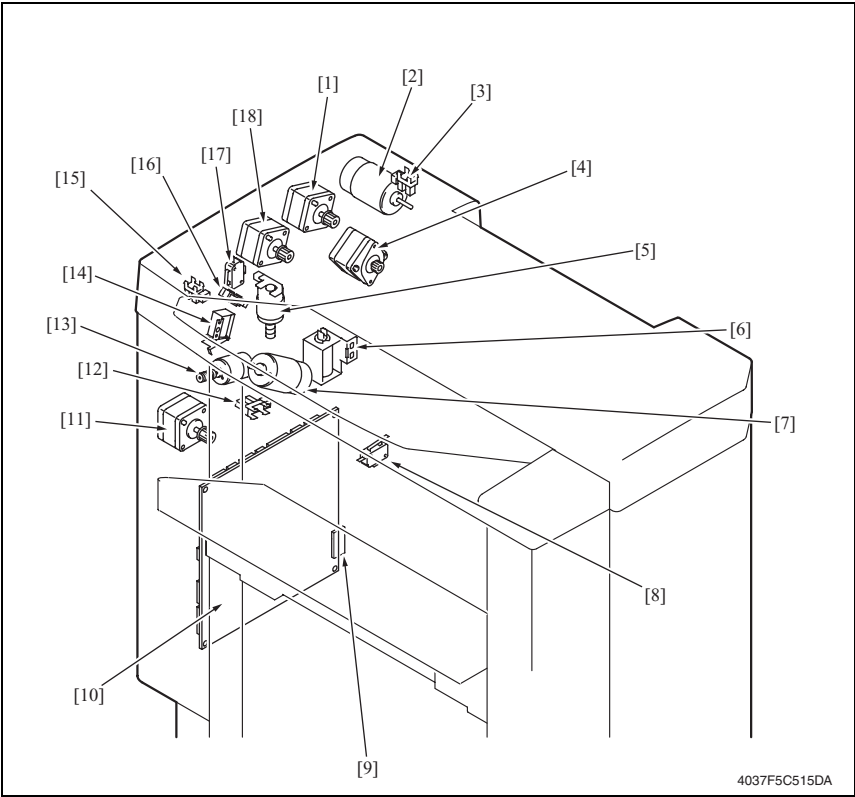


- | | |
|---|---|
| [1] Transport Roller Motor (M2-LCT) | [13] Paper Descent Key (UN1-LCT) |
| [2] Right Lower Door Sensor (PC5-LCT) | [14] Shifter Return Position Sensor (PC11-LCT) |
| [3] LCT Vertical Transport Sensor (PC2-LCT) | [15] Tray Lower Position Sensor (PC13-LCT) |
| [4] Tray Upper Limit Sensor (PC4-LCT) | [16] Shift Tray Paper Empty Sensor (PC9-LCT) |
| [5] Paper Feed Sensor (PC1-LCT) | [17] Shifter Home Position Sensor (PC12-LCT) |
| [6] Upper Paper Empty Sensor (PC3-LCT) | [18] Shift Gate Motor (M3-LCT) |
| [7] Paper Empty Board (PWB-E LCT) | [19] Shift Gate Home Position Sensor (PC14-LCT) |
| [8] Elevator Motor (M5-LCT) | [20] Interface Board (PWB-H LCT) |
| [9] Elevator Motor Pulse Sensor (PC10-LCT) | [21] Main Control Board (PWB-C1 LCT) |
| [10] Lower Limit Sensor (PC7-LCT) | [22] Tray Lock Solenoid (SL1-LCT) |
| [11] Shift Motor Pulse Sensor (PC8-LCT) | [23] Tray Set Sensor (PC6-LCT) |
| [12] Shift Motor (M4-LCT) | [24] Paper Feed Motor (M1-LCT) |

19.4 FS-507 (Option)



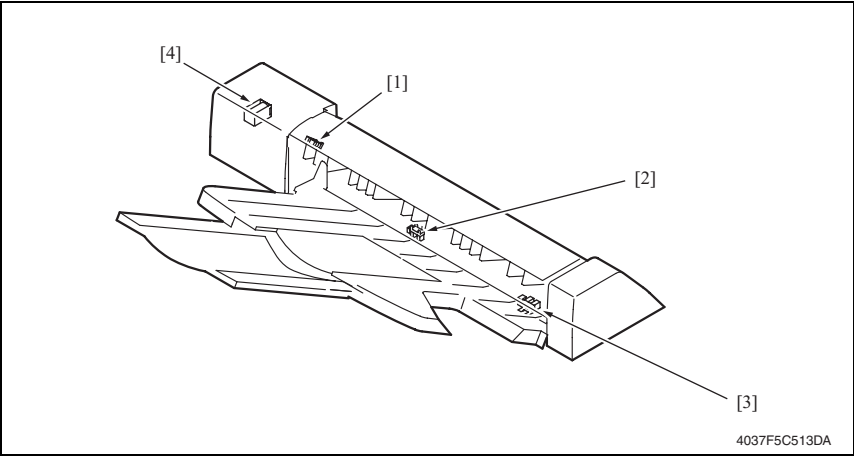
- | | |
|--|---|
| [1] Upper Cover Sensor (PC18-FN) | [12] CD Aligning Home Position Sensor (PC9-FN) |
| [2] 1st Tray Full Sensor (PC6-FN) | [13] Shift Home Position Sensor (PC10-FN) |
| [3] 1st Tray Exit Sensor (PC1-FN) | [14] Shift Motor Pulse Sensor (PC11-FN) |
| [4] Lower Entrance Sensor (PC2-FN) | [15] Shift Motor (M8-FN) |
| [5] Storage Sensor (PC3-FN) | [16] Stapling Unit Moving Motor (M6-FN) |
| [6] 1st Tray Entrance Switching Solenoid (SL2-FN) | [17] Staple Home Position Sensor (PC14-FN) |
| [7] Front Door Sensor (PC17-FN) | [18] Elevator Tray Paper Sensor (PC8-FN) |
| [8] Finisher Tray Paper Sensor (PC5-FN) | [19] CD Aligning Motor (M5-FN) |
| [9] Elevator Tray Upper Limit Switch (S2-FN) | [20] Lower Paddle Motor (M9-FN) |
| [10] Elevator Tray Upper Limit Sensor LED (PWB-C FN) | [21] Elevator Tray Upper Limit Sensor PQ (PWB-D FN) |
| [11] Elevator Motor (M7-FN) | [22] Upper Entrance Sensor (PC4-FN) |



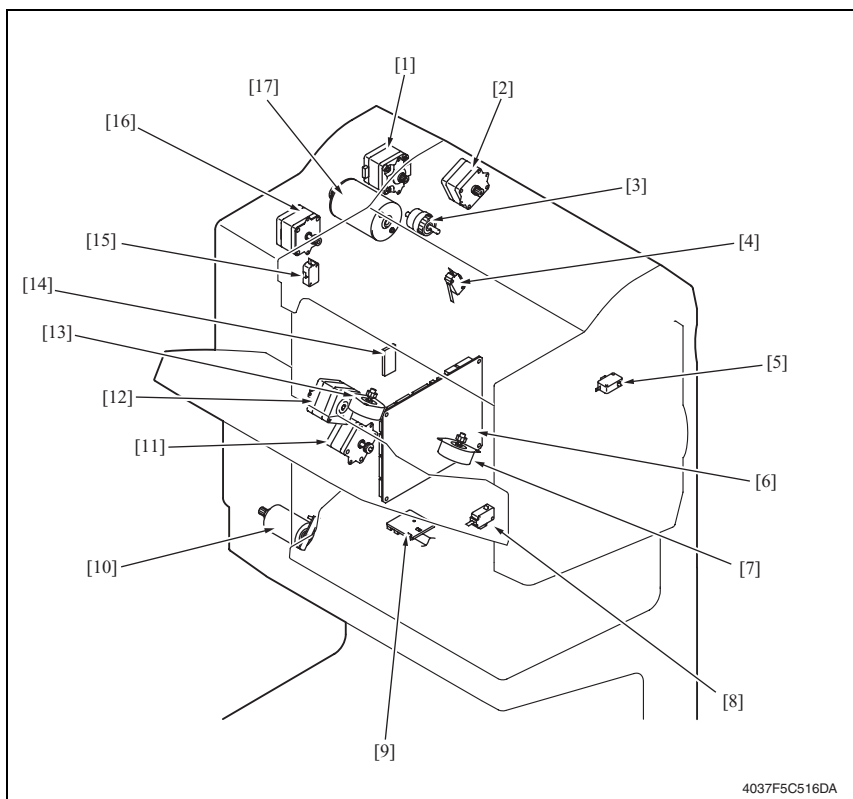
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- | | |
|--|--|
| [1] Upper Entrance Motor (M4-FN) | [10] Control Board (PWB-A FN) |
| [2] Punch Motor (M11-FN) | [11] Exit Motor (M3-FN) |
| [3] Pinch Speed Sensor (PC15-FN) | [12] Storage Roller Home Position Sensor (PC12-FN) |
| [4] Entrance Motor (M1-FN) | [13] Upper Paddle Motor (M15-FN) |
| [5] Exit Roller/Rolls Spacing Motor (M13-FN) | [14] Upper Paddle Solenoid (SL3-FN) |
| [6] Upper/Lower Entrance Switching Solenoid (SL1-FN) | [15] Elevator Tray Full Sensor (PC7-FN) |
| [7] Storage Roller/Rolls Spacing Motor (M12-FN) | [16] Exit Roller Home Position Sensor (PC13-FN) |
| [8] Set Switch (S1-FN) | [17] Elevator Tray Lower Limit Switch (S3-FN) |
| [9] ROM (IC3-FN) | [18] Lower Entrance Motor (M2-FN) |

19.5 JS-601 (Option)

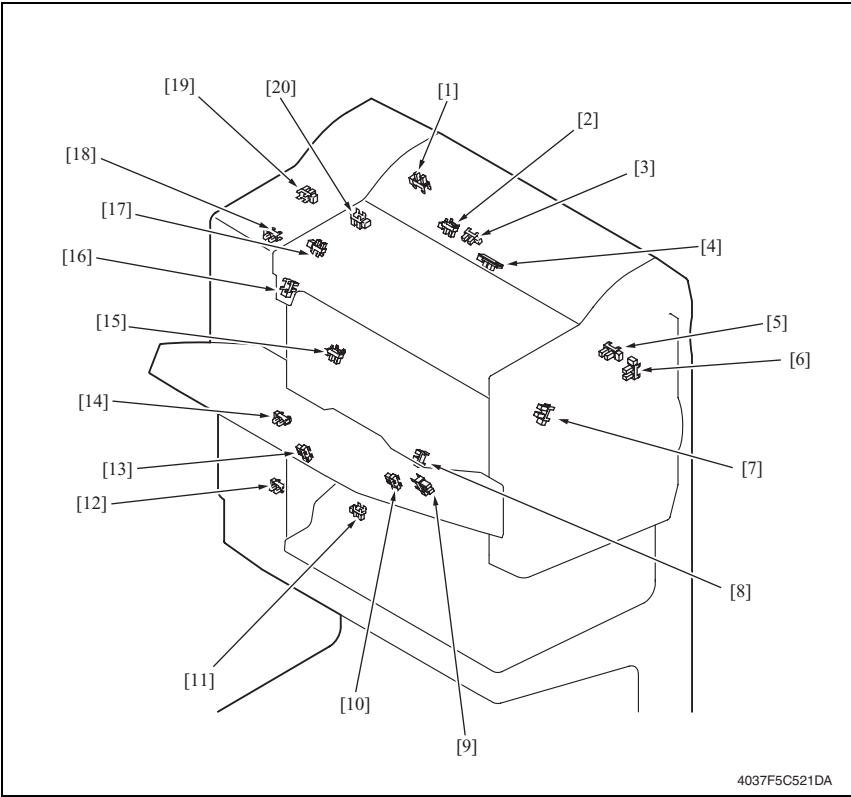


- | | |
|-------------------------------------|--|
| [1] Job Tray Cover Sensor (PC21-FN) | [3] Job Tray Full Sensor (PC20-FN) |
| [2] Job Tray Exit Sensor (PC19-FN) | [4] 3rd Entrance Switching Solenoid (SL-4) |

19.6 FS-603 (Option)

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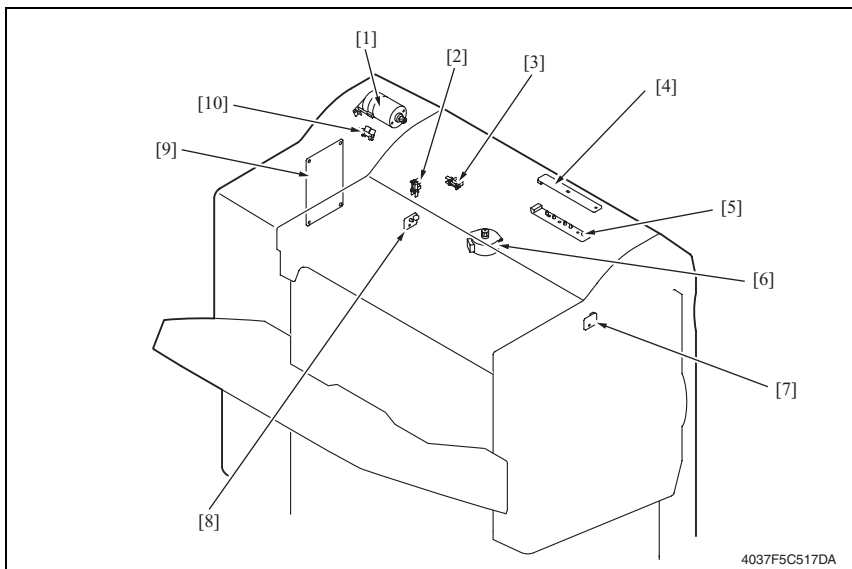
- | | |
|---|---|
| [1] Transport Motor (M1-FN) | [10] Shift Motor (M6-FN) |
| [2] Entrance Motor (M9-FN) | [11] Slide Motor (M8-FN) |
| [3] Saddle Clutch (CL1-FN) | [12] Exit Motor (M3-FN) |
| [4] Joint Open Switch (MS2-FN) | [13] Rear Aligning Motor (M5-FN) |
| [5] Front Door Open Switch (MS1-FN) | [14] ROM (IC6-FN) |
| [6] Finisher Control Board (PWB-A FN) | [15] Staple Safety Switch (Rear) (MS3-FN) |
| [7] Front Aligning Motor (M4-FN) | [16] Paddle Motor (M2-FN) |
| [8] Staple Safety Switch (Front) (MS4-FN) | [17] Staple/Folding Motor (M7-FN) |
| [9] Slide Home Position Sensor (PI18-FN) | |



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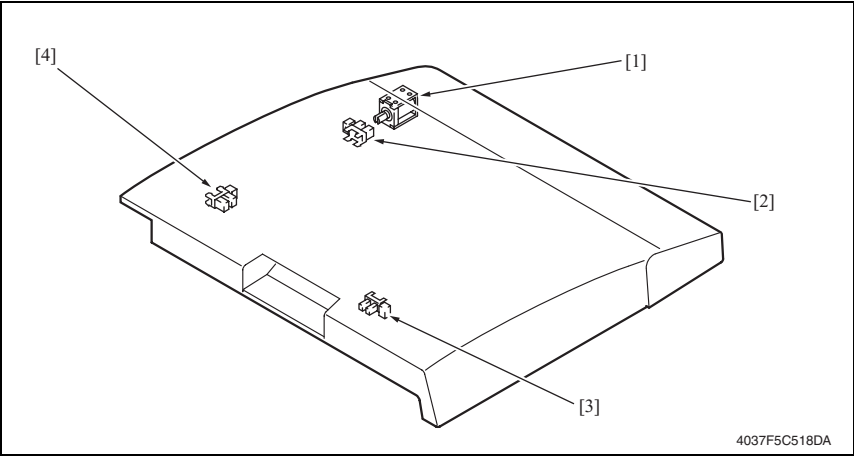
- | | |
|--|--|
| [1] Entrance Sensor (PI1-FN) | [11] Saddle Tray Sensor (PI13-FN) |
| [2] Folding Roller Home Position Sensor (PI12-FN) | [12] Shift Motor Clock Sensor (PI17-FN) |
| [3] Folding Home Position Sensor (PI11-FN) | [13] Stack Full Sensor (PI24-FN) |
| [4] Folding Position Sensor (PI10-FN) | [14] Shift Lower Limit Sensor (PI16-FN) |
| [5] Upper Cover Open Sensor (PI23-FN) | [15] Exit Belt Home Position Sensor (PI7-FN) |
| [6] Front Door Open Sensor (PI22-FN) | [16] Rear Aligning Plate Home Position Sensor (PI5-FN) |
| [7] Front Aligning Plate Home Position Sensor (PI4-FN) | [17] Paddle Home Position Sensor (PI2-FN) |
| [8] Finisher Tray Sensor (PI6-FN) | [18] Shift Upper Limit Sensor (PI15-FN) |
| [9] Exit Tray Sensor (PI8-FN) | [19] Staple/Folding Motor Clock Sensor (PI14-FN) |
| [10] Exit Tray Home Position Sensor (PI9-FN) | [20] Swing Guide Home Position Sensor (PI3-FN) |

19.7 PK-501 (Option)



- | | |
|---|--|
| [1] Punch Motor (M1P-PK) | [6] Side Registration Motor (M2P-PK) |
| [2] Side Registration Home Sensor (PI2P-PK) | [7] Punch Trash Full LED Board (PWB-F PK) |
| [3] Punch Motor Clock Board (PI3P-PK) | [8] Punch Trash Full Photo Sensor Board (PWB-E PK) |
| [4] Photo Sensor Board (PWB-C PK) | [9] Punch Control Board (PWB-B PK) |
| [5] LED Board (PWD-D PK) | [10] Punch Home Position Sensor (PI1P-PK) |

19.8 Horizontal Transport Unit



- | | |
|--|--|
| [1] Entrance Switching Solenoid (SL1-HO) | [3] Paper Sensor (PC1-HO) |
| [2] Turnover Empty Sensor (PC6-HO) | [4] Horizontal Unit Door Sensor (PC4-HO) |

20. Connector layout drawing

Description

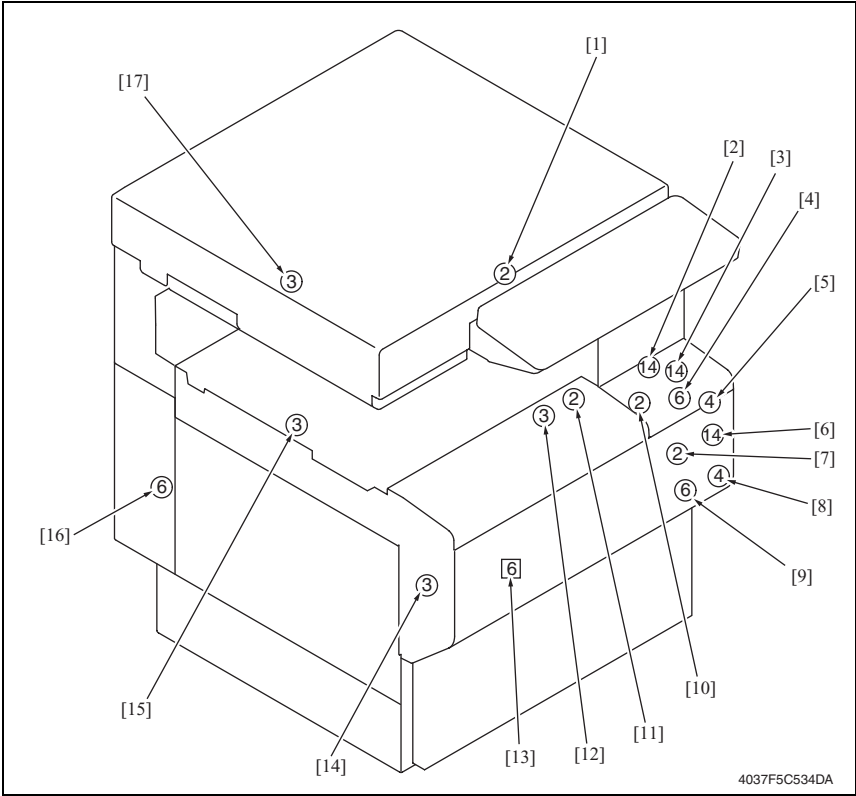
Number of Pin

①

Possible to confirm by removing external cover.

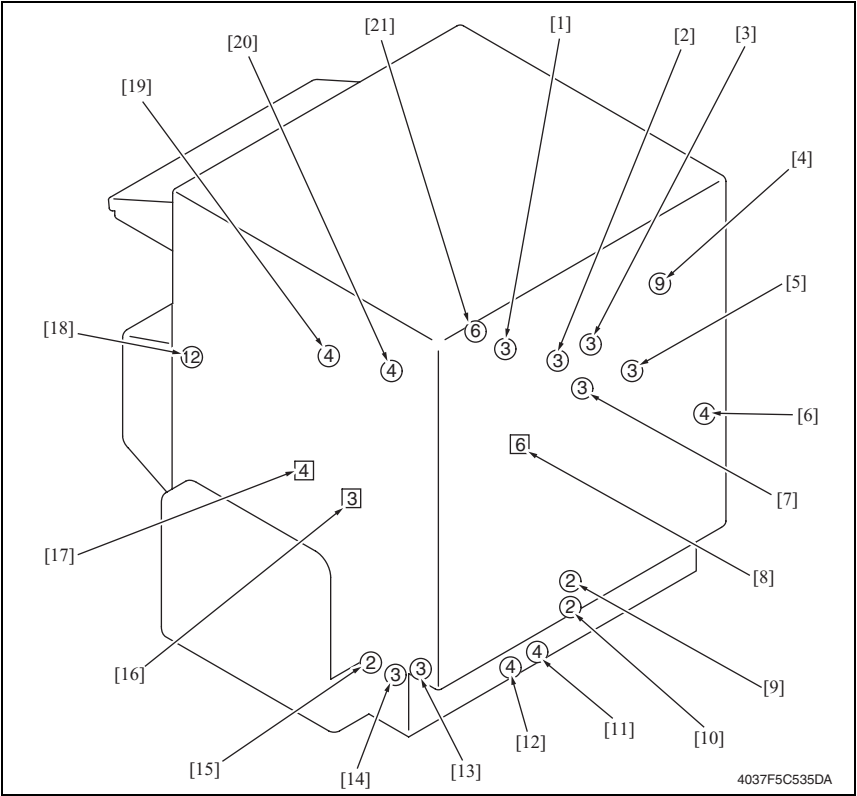
①

Not possible to confirm by removing external cover.



No.	CN No.	Location	No.	CN No.	Location
[1]	CN54	N-13	[10]	CN61	D-12
[2]	CN19	D-25 to 26	[11]	CN45	R-3
[3]	CN18	D-23 to 24	[12]	CN44	R-3
[4]	CN9	E-13 to 14	[13]	CN39	D-14
[5]	CN8	E-13	[14]	CN99	D-11 to 12
[6]	CN10	E-14	[15]	CN40	M-1 to 2
[7]	CN58	R-16	[16]	CN41	U-10 to 11
[8]	CN6	D-4 to 5	[17]	CN98	D-12
[9]	CN4	D-4			

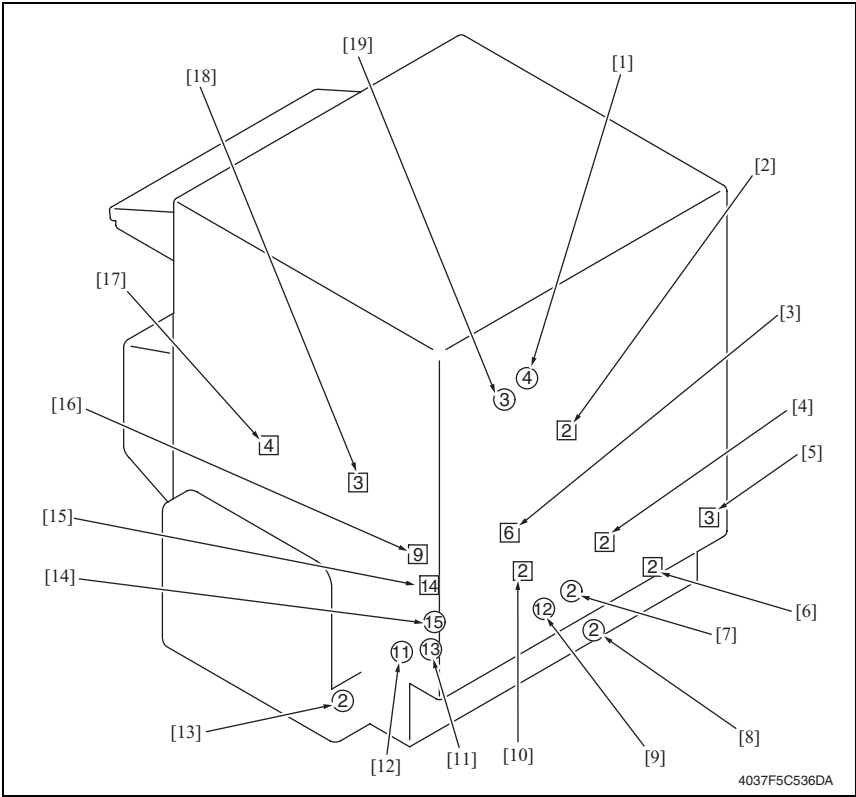
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No.	CN No.	Location	No.	CN No.	Location
[1]	CN38	D-8	[12]	CN101	S-22
[2]	CN69	D-21	[13]	CN103	R-22
[3]	CN11	D-20	[14]	CN108	S-25
[4]	CN62	M-18	[15]	CN106	S-24
[5]	CN75	M-17	[16]	CN25	D-2
[6]	CN57	M-17	[17]	CN29	D-1 to 2
[7]	CN22	I-8	[18]	CN7	D-15
[8]	CN14	D-19	[19]	CN32	D-20 to 21
[9]	CN28	N-27	[20]	CN31	D-20
[10]	CN48	M-22	[21]	CN35	R-9
[11]	CN102	S-22			

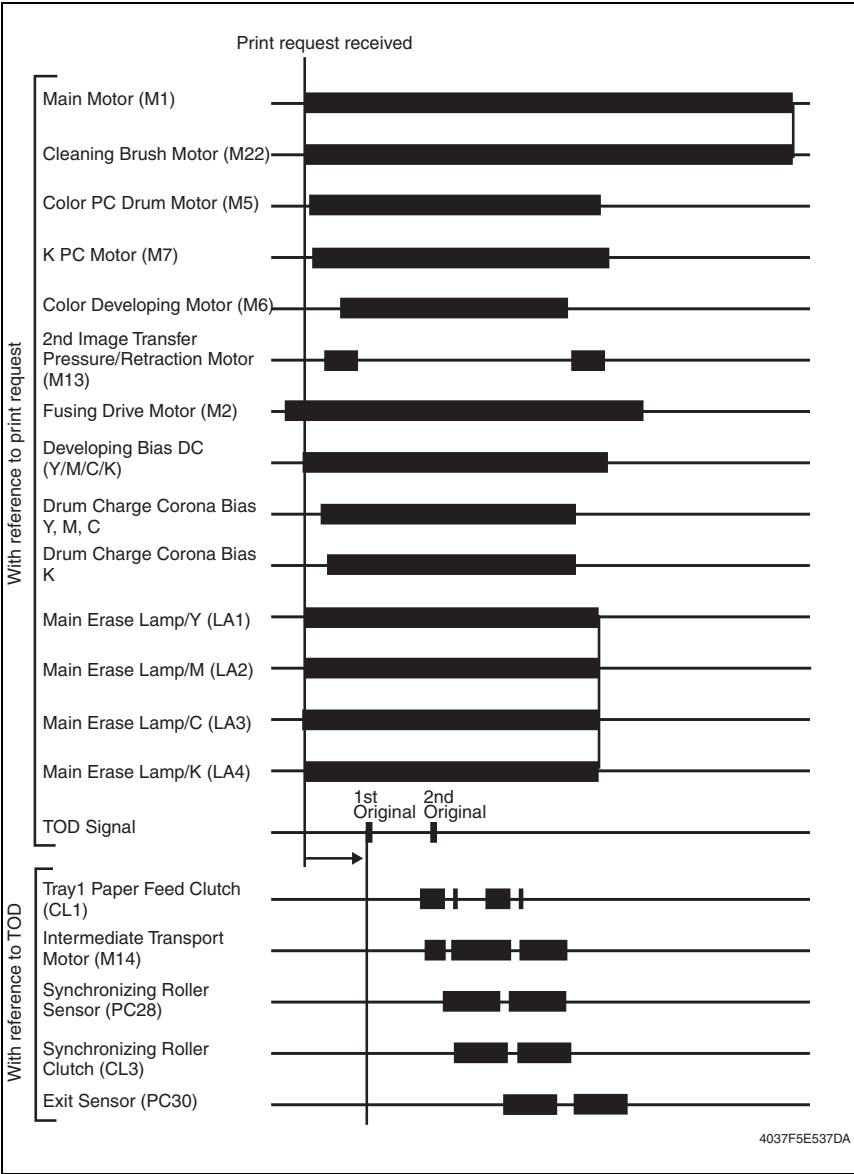
Appendix



No.	CN No.	Location	No.	CN No.	Location
[1]	CN72	I-8	[11]	CN105	R-25
[2]	CN5	D-5	[12]	CN104	R-23 to 24
[3]	CN15	D-19	[13]	CN34	S-24
[4]	CN12	J-2	[14]	CN107	R-26
[5]	CN13	I-8	[15]	CN24	E-2 to 3
[6]	CN26	D-3 to 4	[16]	CN27	E-1 to 2
[7]	CN50	J-2	[17]	CN23	I-7
[8]	CN49	N-27	[18]	CN21	D-3
[9]	CN16	N-26 to 27	[19]	CN17	I-9
[10]	CN3	D-5			

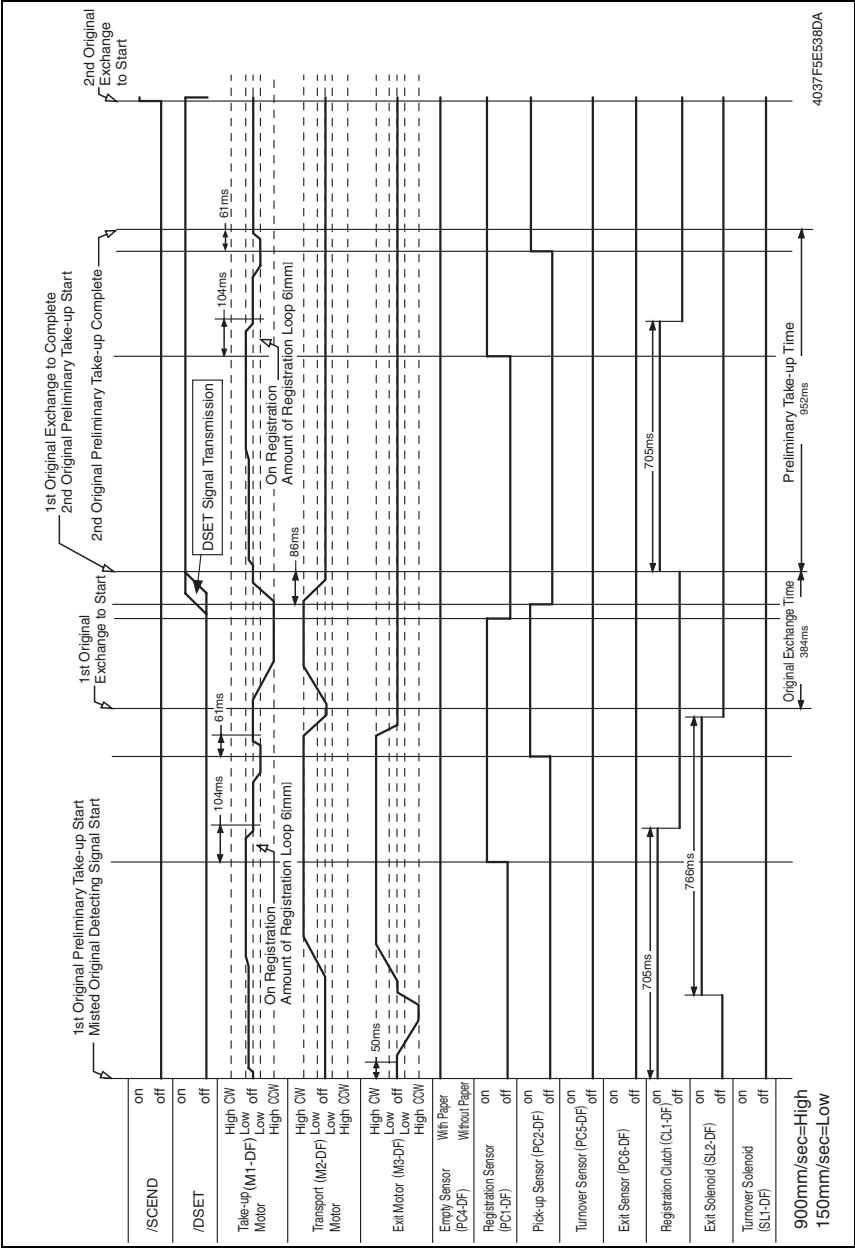
21. Timing chart

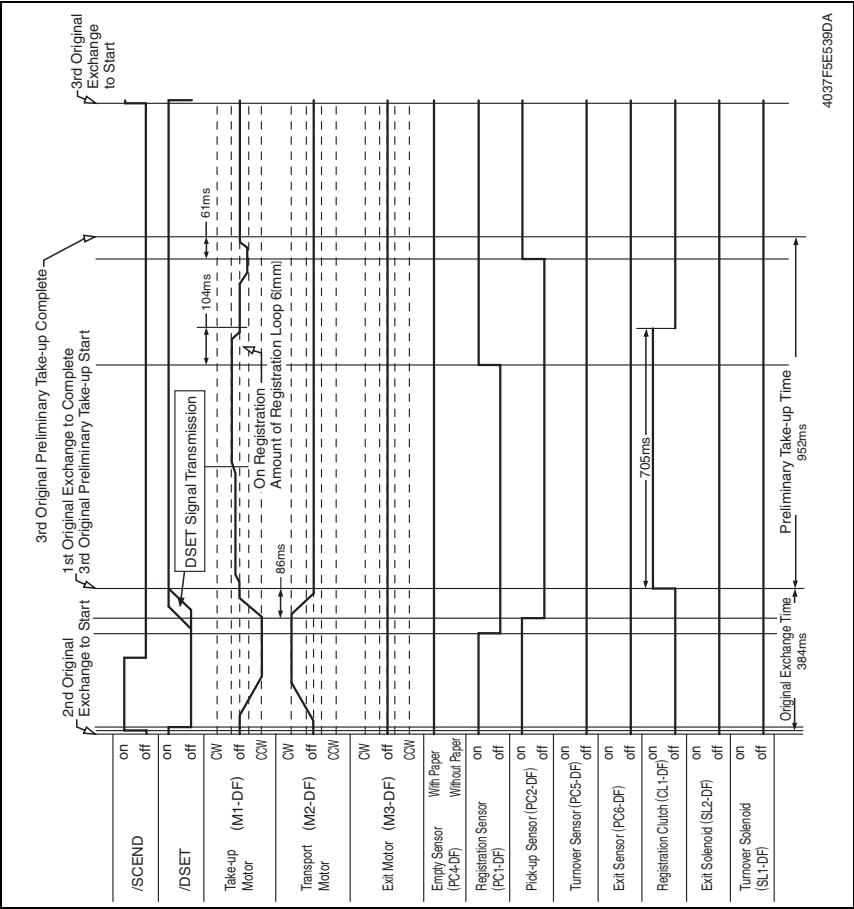
21.1 Main unit

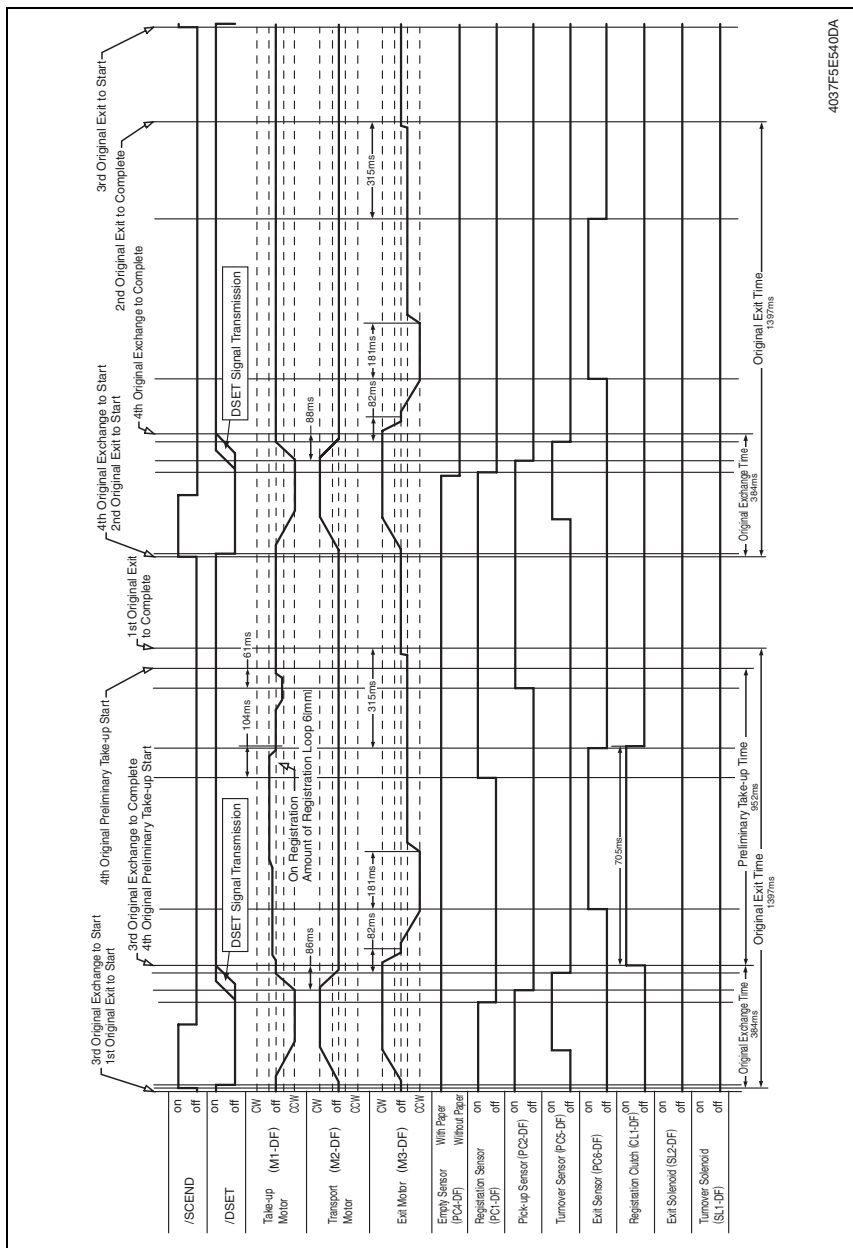


21.2 Automatic Document Feeder

21.2.1 1-sided mode

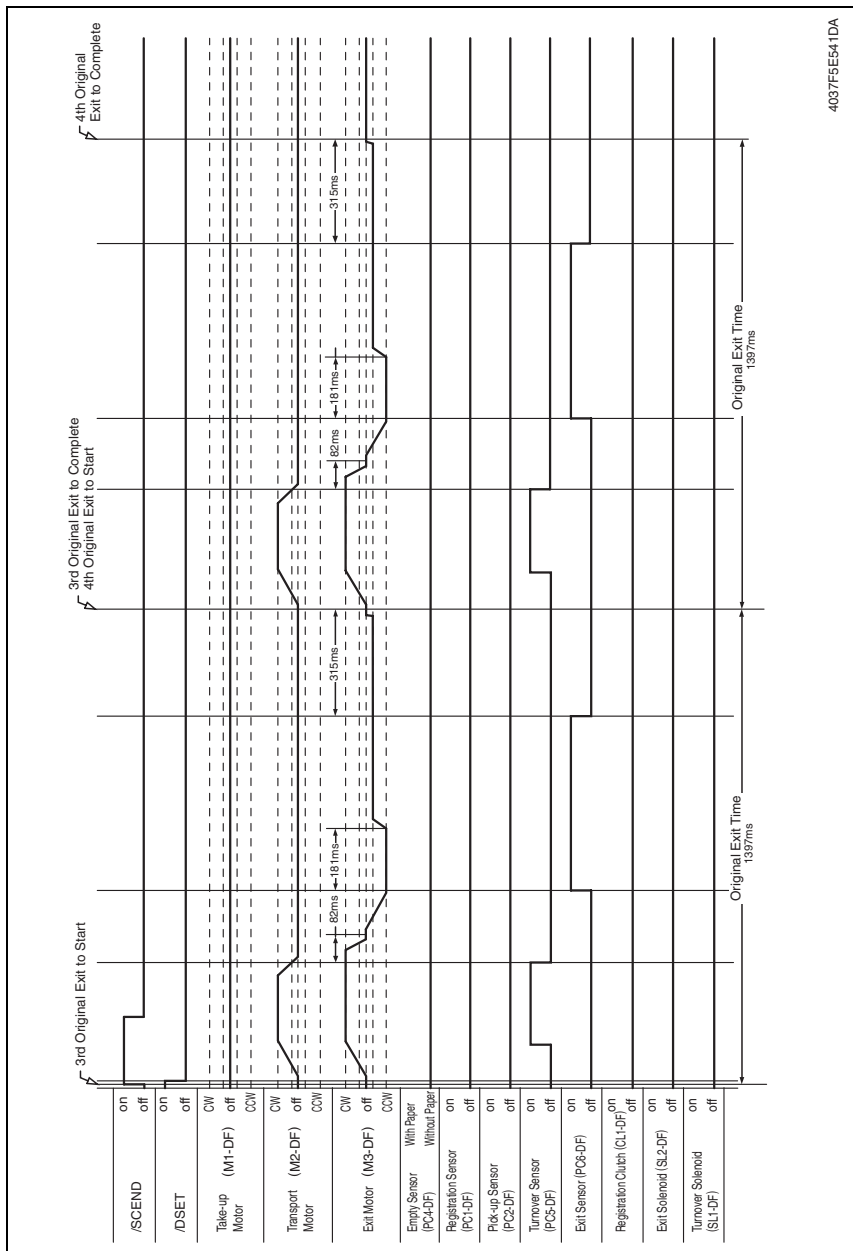




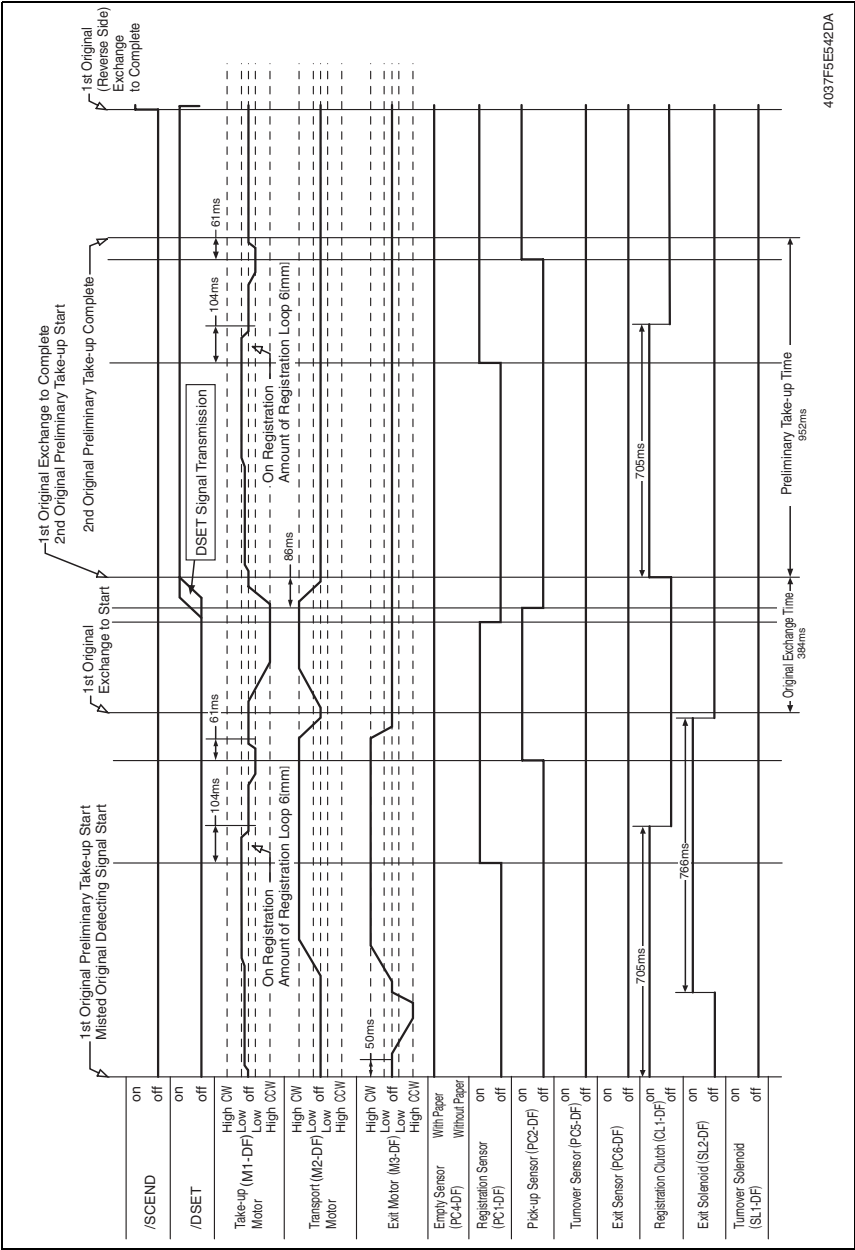


21. Timing chart

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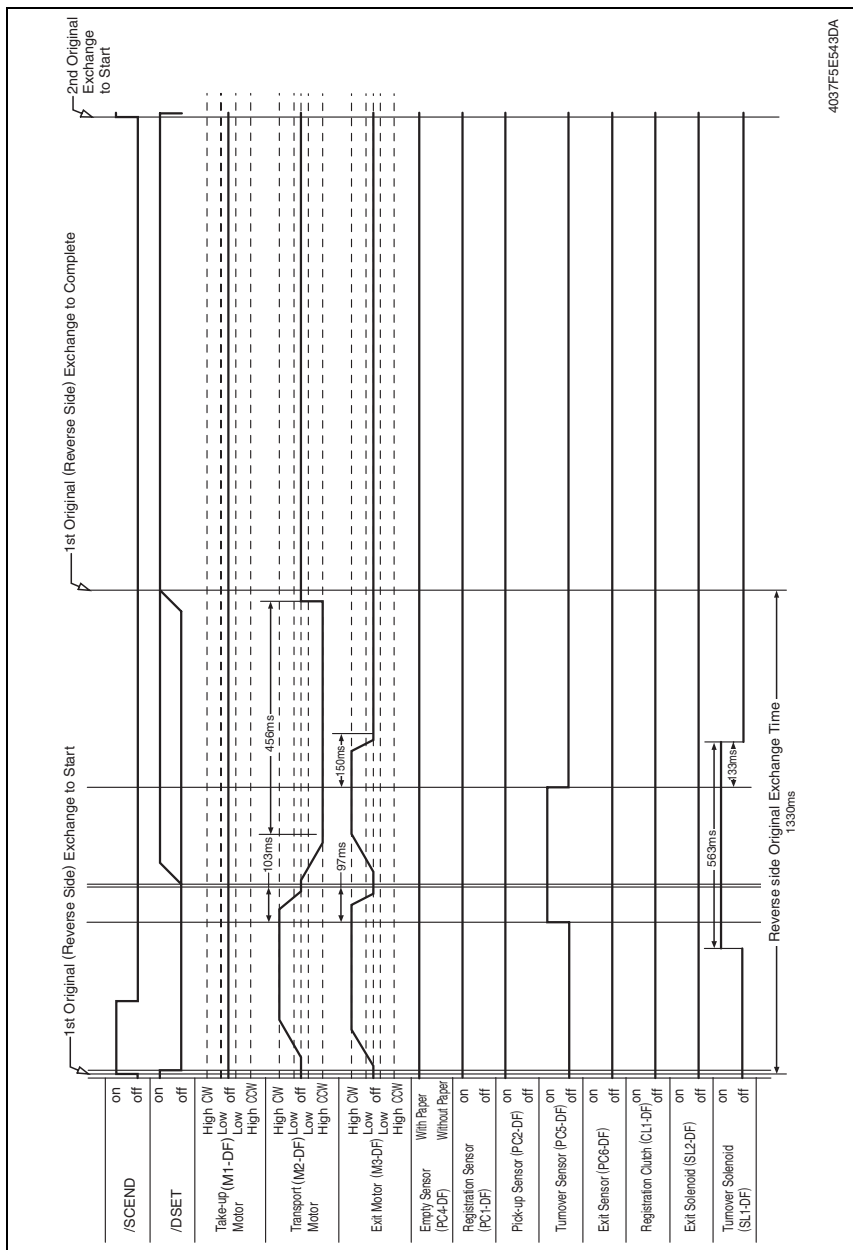


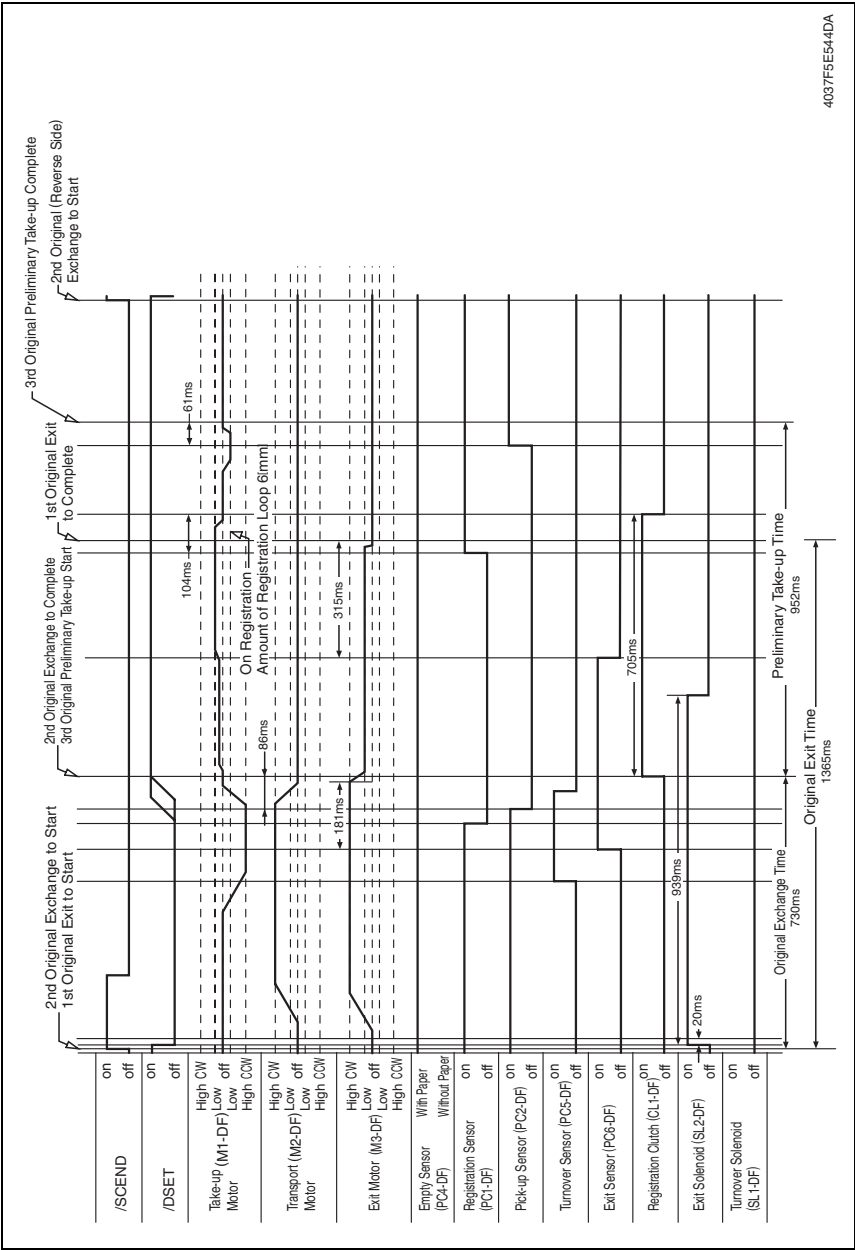
21.2.2 Mixed original detection mode



21. Timing chart

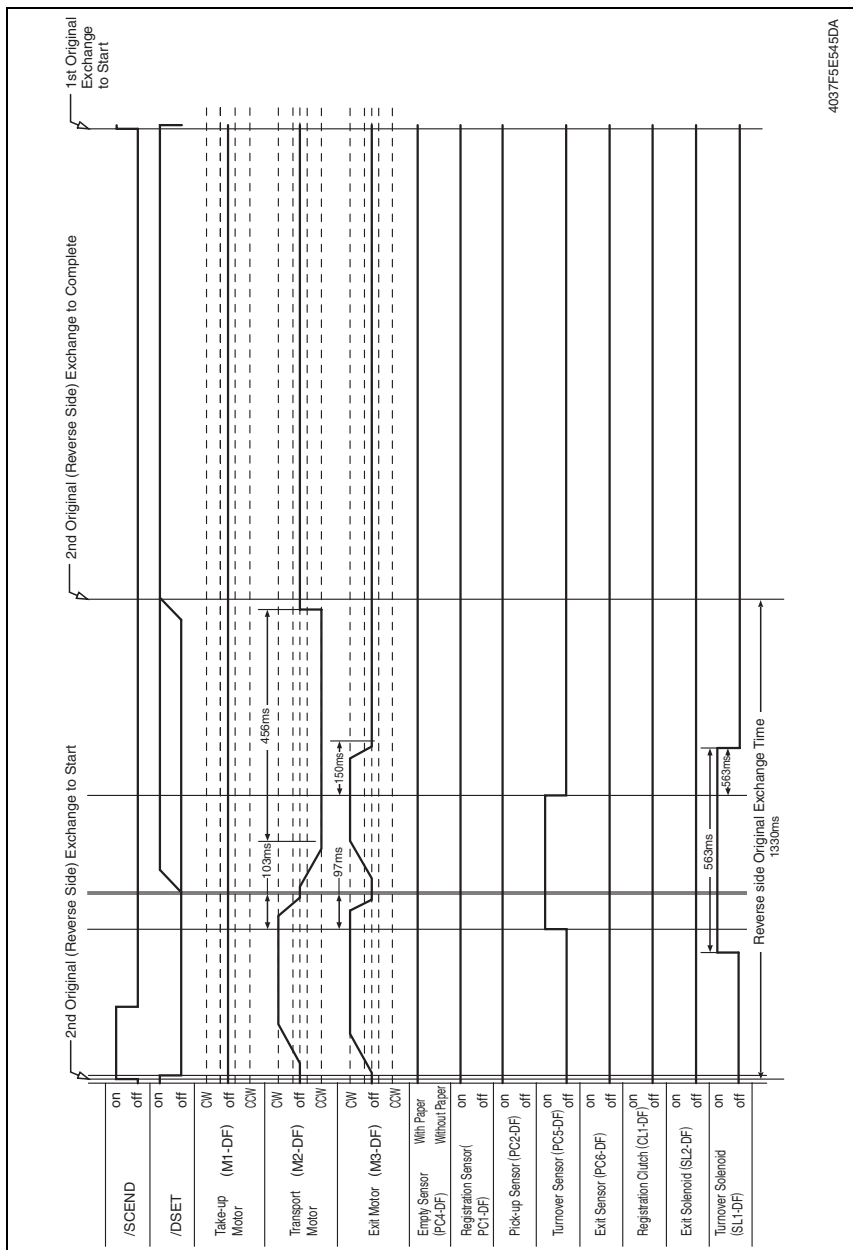
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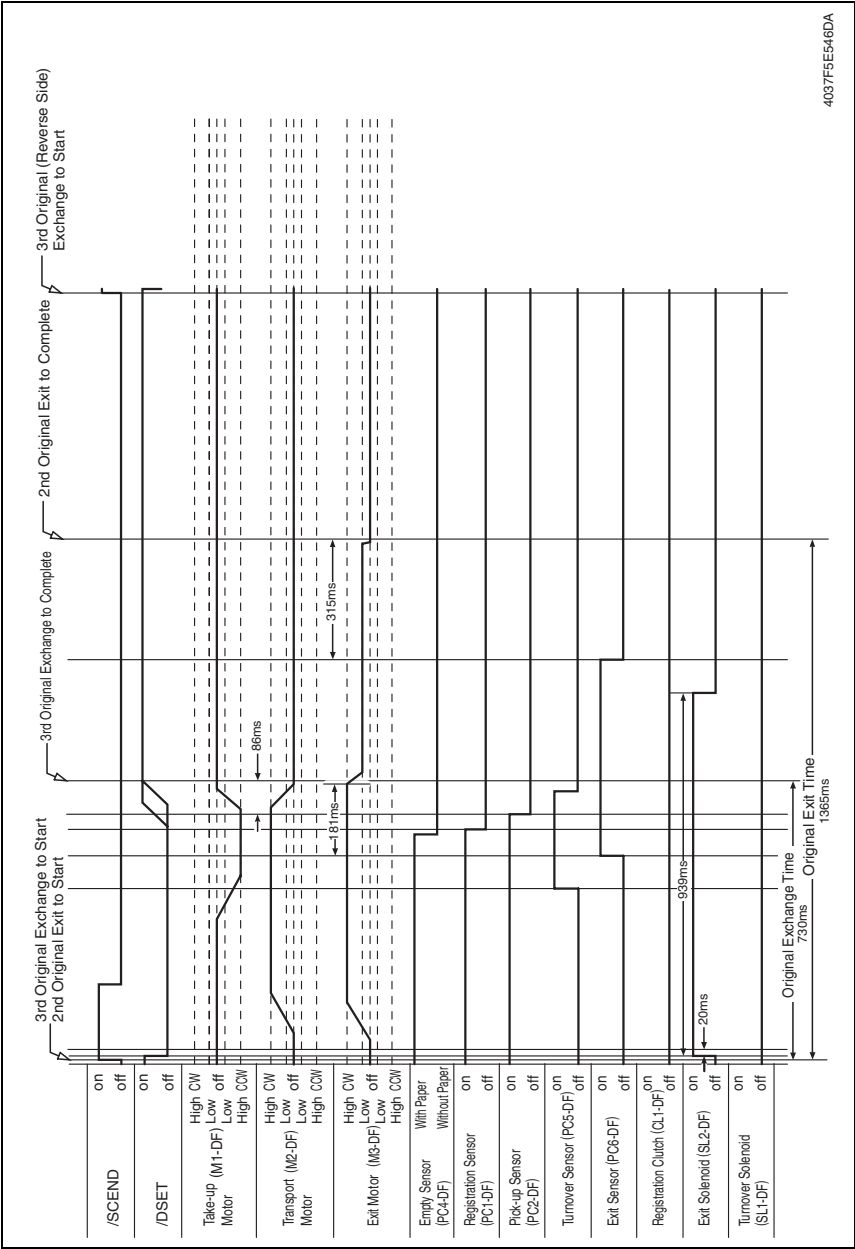


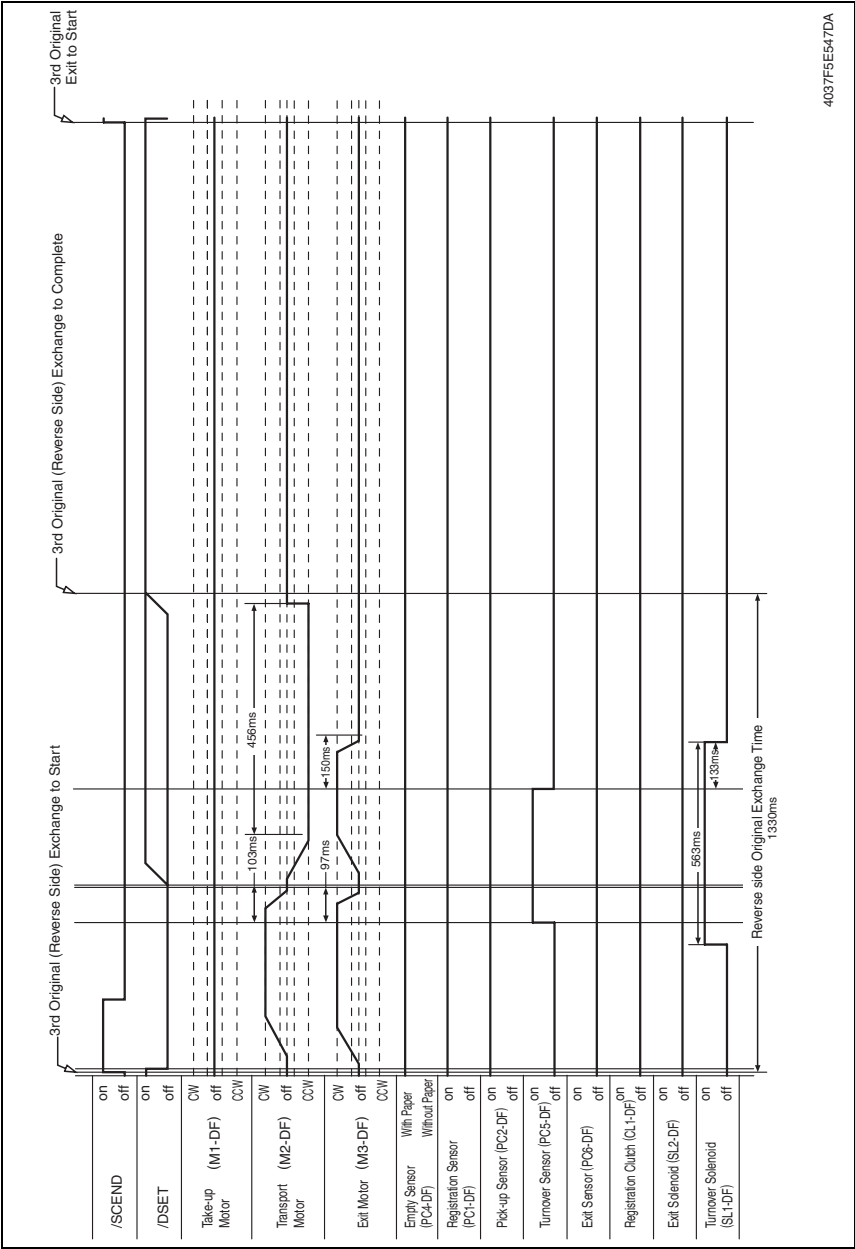


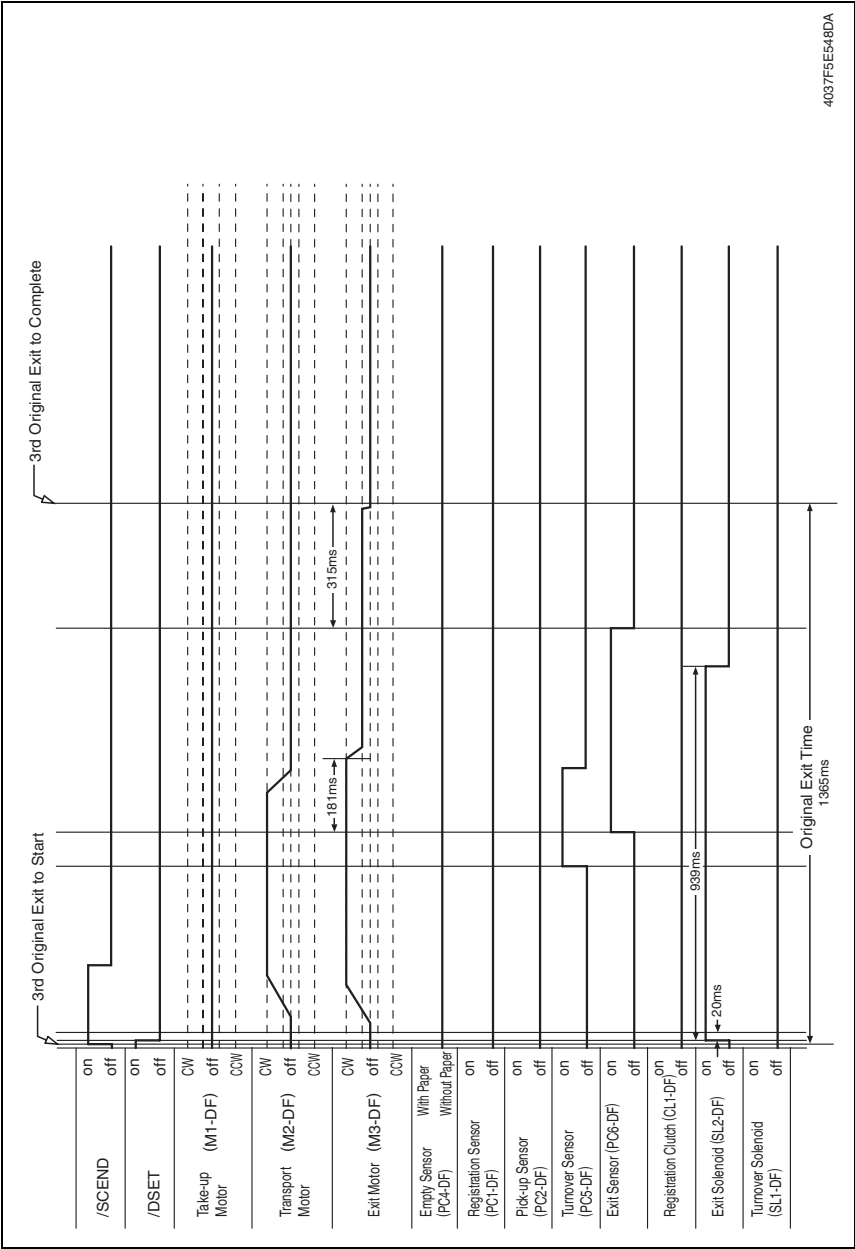
21. Timing chart

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